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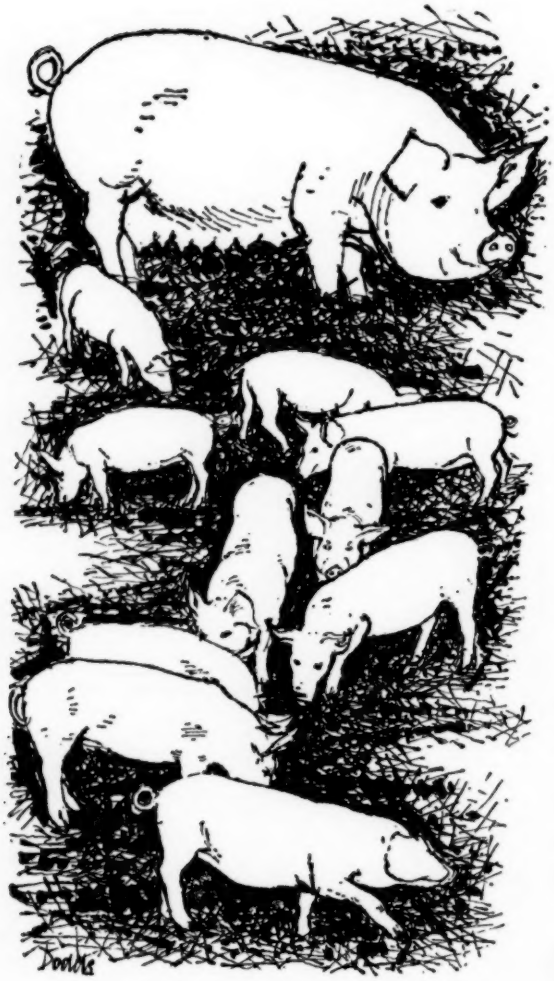

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London Then, and Glasgow Now

SIXTY years ago the annual congress of the then "National" was held in London, having as its climax a dinner at the Hotel Cecil when "close on a hundred members and guests, including ladies," were present. The congress was notable historically in that the subject of greatest moment was the possibility of combining the various veterinary associations, which were scattered all over the country, into a national body. The project had among its principal sponsors Dr. O. C. Bradley and Professor Gofton, and although the congress of 1910 was unable to report complete success, a committee was appointed to consider the idea in all its details, and to iron out the difficulties and differences which became apparent during discussion. It seems fair to say, however, that the 1910 congress was the cradle of the B.V.A. as its members know it to-day.

In other respects it differed markedly from the current B.V.A. congress over which Mr. Hignett will preside. In 1910 only a handful of papers was read and discussed, including one on "Shivering and Stringhalt" by "the veteran Professor McCall"; during the coming week delegates will hear 32 papers read in addition to clinical and scientific demonstrations and closed-circuit television broadcasts. Among the delegates and the speakers higher academic qualifications were exceptional in 1910; at Glasgow they will almost be taken for granted. Unqualified practice flourished, and even teachers in the Schools were not above (if current criticism is to be accepted) occasionally competing at reduced fees with their colleagues in private practice.

Yet there were items of policy discussed in those earlier days which concern the profession still: veterinary participation in meat inspection; recruitment for the army veterinary service; even—a repeated cry of our own—the necessity for publishable clinical articles. Nor were such similarities confined to serious matters. There appears to be a tradition even in the manner of entertainment. We read (*Vet. Rec.* **23.** 81) that "most . . . gave the day . . . to such entertainments as the scenic and mountain railways (in the Japanese Exhibition at the White City), the 'witching waves,' and even a somewhat diabolical churning apparatus known as the 'wiggle-woggle.'" This programme is said to have "suited the general taste"; and now, half a century later, one of the principal social attractions in the coming week will be to sample the "witching waves" in a day's sail down the Clyde.

The dinner, however, seems to have differed in certain respects from that which delegates will enjoy next Tuesday. Apart from the fact that at least five times as many people may be expected to be present, it is doubtful whether the principal speaker will address the company on the subject of the Armed Forces, as was the case at the Hotel Cecil; nor would the Officers of the Royal College find it necessary to assure the profession that "every member of that body (the R.C.V.S. Council) is working hand in hand." Ladies present will continue to add beauty and grace to the occasion; but will those of 1960 compare with their grandmothers so it may be said of them (as did Professor Macqueen on the earlier occasion) that, "the chastening influence of their presence has served to mollify the captious aggressiveness of some of the members"? They may retort that chastening influences may have been generated, in part at least, by the wearing of bustles and they no longer enjoy that advantage. Be that as it may the "captious aggressiveness" of the members will perhaps be ameliorated by more insidious charms: a luxury of the Glasgow congress which makes insignificant even the delights of the White City wiggle-woggle is to be a visit (over booked) to the exhilarating premises of Messrs. Johnnie Walker.

On a more serious note, it is a happy coincidence that, towards the close of Congress, the new President, a senior teacher in the Glasgow Veterinary School, will be enrobed in his own city. The School and its staff, together with the University authorities, are contributing both materially and intellectually on a most generous scale to the success of the week, and they may feel some return not only in the gratitude which will be accorded them by the Association, but in the knowledge that one of themselves is raised to the highest office in the B.V.A. for the year ahead.

Report on the Growth and Health of Rats Fed on Radionic-Treated Wheat

BY

N. K. JENKINS

AND

J. R. PARRY WILLIAMS

Harper Adams Agricultural College, Newport, Salop

SUMMARY.—Weaner female rats were fed for 10 weeks on diets containing wheat treated by "radionics" or on untreated wheat. Observations were made on the average weight gained per week and the food conversion efficiency. There was no statistically significant difference in the 2 groups during any week of the experiment. Observations on the general health and condition of the experimental animals showed no clear-cut differences between the groups.

INTEREST has been aroused by the assertions of workers who have claimed for many years to have improved the health and growth of plants and animals by the application of "radionics." In particular it has been claimed that food grown on soil untreated by the normal artificial fertiliser practice but treated by "radionics" has a better value for animals than that produced by the more conventional means.

The matter has been discussed by Miller (1957), Watson (1957) and Bell (1957) and was the subject of a report to the Joint Sections of Medicine and Electrotherapeutics of the Royal Society of Medicine presented by Horder (1925). It has been mentioned recently in the lay Press (*The Times*, 1960).

Aim of the Present Work

The aim of the present work was to test the value of wheat grown on certain plots which had been subjected to radionic treatment under the direction of F. H. B., against wheat from plots in the same experimental lay-out which had been grown under conventional farm conditions and were untreated by radionics.

Rate of growth and food conversion efficiency, as well as subjective observations on the health of animals, were taken as criteria in the measurement of the effectiveness of treatment.

Experimental

Animals

Weaner female Wistar rats (weighing 60 to 70 g. each) were purchased, and placed individually on wire floors in M.R.C.-type galvanised metal cages. They were allowed 14 days to settle in, during which time they were fed the experimental diet. The treatment was allocated to animals at random, save for one element of local control whereby it was arranged that at least 7 animals (out of a total of 15) should receive each diet, in each of the 2 independent racks on which the cages were placed, and which were situated opposite one another in the animal house. Paper sheets under the wire floors enabled the major portion of the food spillage to be collected. The animals were weighed (± 1 g.) 3 times weekly, and each animal was fed individually throughout the test.

Food

F. H. B. suggested that the wheat should constitute 75 per cent. of the ration, this being the optimum level in his opinion.

The ration consisted of :—

Parts	
74·5	Rolled wheat.
8·0	Rolled oats.
4·0	Dried grass.
8·0	White fish meal.
2·0	Dried yeast.
2·0	Dried skimmed milk.
1·0	Commercial sodium chloride.
0·5	Limestone flour.

The fish meal was not solvent-extracted. The food differed only in respect of the treated or untreated wheat (giving 2 treatments).

The average analysis of the experimental food was :—

	Per cent.
Moisture	12·2
Ash	4·9
Crude protein	16·9
Crude fibre	2·9
Ether extract	2·5
Nitrogen-free extractive ...	60·6

The food was pelleted in a pressurising machine to pellets of ¼-in. diameter.

Each animal was fed *ad lib.*, at least 2 batches of food being provided each week. Cod-liver oil (800 I.U. vit. A per g. and 150 I.U. vit. D_3 per g.) was added to each batch just before feeding so that the diet contained 1 per cent. of cod-liver oil. Food spillages were collected from the sheets of paper under the wire floor 3 times a week and residues from the feeding baskets were collected once a week. Calculations of total food consumed by each animal were made weekly. Clean drinking water was supplied *ad lib.* from drip feeders.

Duration of the Experiment

The experiment began on March 3rd, 1960, and ran continuously for 10 weeks by which time the rate of gain in bodyweight was so small as to render measurement difficult.

Temperature

Records of maximum and minimum temperatures

at 3 places in the house were kept throughout and are shown in Table I. During frosty and windy periods, diurnal fluctuations were greater than would normally be considered desirable, although the house was heated electrically.

TABLE I
TEMPERATURE IN THE ANIMAL HOUSE DURING THE EXPERIMENT
WEEKLY AVERAGE TEMPERATURE (°F)

Week	Maximum	Minimum	Mean	Diurnal range
1	71·0	60·8	65·9	10·2
2	71·9	64·8	68·4	7·1
3	71·9	61·6	66·8	10·3
4	72·7	63·8	68·3	8·9
5	72·7	66·1	69·4	6·6
6	74·1	65·8	70·0	8·3
7	73·0	61·5	67·3	11·5
8	74·6	64·2	69·4	10·4
9	74·1	65·8	70·0	8·3
10	73·0	61·5	67·3	11·5

Results

Rate of Growth

Table II shows the average weekly live-weights and live-weight gains of the experimental animals. At the start of the experiment the average weight of the untreated group was 3·20 g. less than that of the treated group. At the end of the experiment the average weight of the untreated group was 2·99 g. less than that of the treated group. There were no

TABLE II
AVERAGE WEEKLY LIVE-WEIGHT AND LIVE-WEIGHT GAINS OF THE EXPERIMENTAL ANIMALS

Week	Number of animals in each group	Average weight (g.)		Average weight gained (g.)	
		Treated wheat	Untreated wheat	Treated wheat	Untreated wheat
0	15	86·33	83·13	—	—
1	15	104·46	100·86	18·13	17·73
2	14	126·89	121·00	22·43	20·14
3	14	141·89	138·71	15·00	17·71
4	14	153·18	150·71	11·29	12·00
5	14	160·54	159·42	7·36	8·71
6	14	167·97	166·06	7·43	6·64
7	14	172·26	172·63	7·29	6·57
8	14	181·19	177·20	5·93	4·57
9	14	186·33	183·27	5·14	6·07
10	14	190·40	187·41	4·07	4·14

fluctuations in the rate of gain which diminished steadily throughout the experiment in both groups after an initial rise in Week 2. There was no statistically significant difference ($P = 0.05$) in the average gain in weight of the 2 groups during any week of the experiment.

Food Conversion Efficiency

After a marked rise in food conversion efficiency during the second week, the conversion figures fell steadily until the sixth week (Table III). Some fluctuations occurred during the second half of the experiment. The initial rise is probably due to the fact that during this week there was a definite increase in the average mean temperature (Table I) and a decrease in diurnal range which was lower only in Week 5. These factors would tend to encourage efficient food conversion. The later fluctuations are probably caused by the fact that there were only small gains in weight. There was no statistically significant difference ($P = 0.05$) in the average food conversion efficiency of the 2 groups during any week of the experiment.

TABLE III
AVERAGE WEEKLY FOOD CONVERSION EFFICIENCY

Week	Number of animals in each group	Food conversion expressed as :— g. weight gained / g. food eaten × 1,000	
		Treated wheat	Untreated wheat
1	15	155	157
2	14	199	185
3	14	129	157
4	14	94	101
5	14	65	77
6	14	62	55
7	14	67	58
8	14	53	41
9	14	45	53
10	14	39	38

General Health

The general health and condition of the animals was recorded at each weighing. Note was taken of animals appearing unduly nervous or in any way " out of condition." These animals are reported as " moderately healthy," whilst animals about which no special remark could be made are reported as " in good health." These records are shown in Table IV. A number of animals are reported here as " in poor health," and details of their case histories are given :—

No. 1. Treated wheat diet. In moderate health from the start. Quickly became less strong and died on Day 13. *Post-mortem* report : acute pneumonia.

No. 22. Treated wheat diet. In good health until Day 21. Broke both upper incisors on this day and fed on mash for 12 days. Apparently made good recovery. Became unwilling to eat from Day 60 or thereabouts. Killed after the experiment. *Post-mortem* report : intussusception of the intestine with marked inflammation.

No. 30. Treated wheat diet. Poor health from the start of the experiment with apparent mild attack of pneumonia. Later recovered and made good weight gains towards the end.

No. 4. Untreated wheat diet. Weakly from the start. Collapsed and was killed on Day 10. *Post-mortem* report : abscess on lower jaw.

TABLE IV
GENERAL HEALTH OF EXPERIMENTAL ANIMALS

Report	Number of animals	
	Treated wheat	Untreated wheat
In good health ...	9	12
Moderately healthy ...	3	2
In poor health ...	3	1

(Continued at foot of col. 2 overleaf)

Clinical Note

A Case of Pyometra Associated with Gross Hypertrophy of the Mammary Glands in the Cat

K. J. GRAINGER and R. S. JONES
Uckfield, Sussex

Subject. An 8-month-old mongrel queen.

History. March 29th, 1960. Examination revealed all the mammae grossly enlarged and a tentative diagnosis of mastitis was made; 300,000 units of penicillin were injected intramuscularly. The cat was fit, eating well, and had a normal temperature.

Third day. The mammae were of similar size, 300,000 units of penicillin and ⅓ g. of streptomycin were injected intramuscularly, although the cat was otherwise fit.

Seventh day. A further examination was made, and the mammae were even larger. Pulse temperature and respirations were normal, and the appetite was good. The mammae were each approximately the size of a large hen's egg, uncomfortably large, and were a gross impediment to walking. A white creamy coloured discharge was observed at the vulva.

Diagnosis. Hormonal inbalance associated with an open pyometra, causing mammary hypertrophy.

Treatment. The cat was anaesthetised with ether and ovaro-hysterectomised through a low right-flank incision. 300,000 units of penicillin, 500 units vitamin A and 250 units vitamin D were administered by intramuscular injection.

Post-operative Course. Second day. The cat had recovered from the anaesthetic.

Fourth day. The cat was breathing rapidly, but the temperature was normal; 300,000 units of penicillin were given intramuscularly, ⅓ g. of triple sulphonamide* was administered daily for 3 days. The mammary glands were reducing in size.

Ninth day. The cat remained fit, and the sutures were removed. Each mammary gland was now reduced to about the size of a hazel nut.

Thirteenth day. Some mammary tissue was still palpable.

Examination of uterus and ovaries. The uterus was unevenly distended over the horns and body, and contained thick creamy pus. The right ovary contained a large corpus luteum, and the left ovary 2 large active corpora lutea.

Discussion. It is suggested that the pyometra and mastitis were associated with the corpora lutea of pregnancy, and that either the resorption of the foetuses had taken place, or infection was introduced immediately after conception.

* Trinamide: May & Baker.

The Case of "Angers"

BY
J. A. GARRETT
Epsom

THIS is to record, mainly by means of an X-ray, the injuries to the left foreleg sustained by the colt "Angers" during the running of the Epsom Derby, 1960. Also it records that, on examination, the histological structure of the fractured bone appeared normal, and that analysis of the calcium and phosphorus content of the bone revealed nothing abnormal.

The injuries were:—

Skin. This had been pierced in 2 places on the outside by pieces of bone, giving rents of about 1 to 1½ inches in length.

Cannon bone (metacarpus). A longitudinal section of bone had separated from the main body.

Sesamoid bones. The inner sesamoid had split horizontally.

Pastern bone (1st phalanx). The whole bone had broken down into large and small pieces and bone powder. Periosteum, blood vessels and nerves had been cut to shreds by the fragmented bone.

Portions of the pastern bone were examined at the Royal Veterinary College by means of X-ray and histological methods and reported normal. Another fragment was ashed down and revealed 38.2 per cent. calcium content and 17.5 per cent. phosphorus content, both of which values are within normal limits.

Acknowledgments.—I am indebted to Professor J. McCunn and the Department of Anatomy of the Royal Veterinary College for carrying out the histological and X-ray examination of the bone, and to Dr. D. G. Harvey of the Department of Pathology for the bone-ash analysis.

Report on the Growth and Health of Rats.—*Concluded.*

Whilst it is realised that these observations are somewhat arbitrary it is seen that there is no clear-cut difference in the general health of the 2 groups, and in all cases, except perhaps one (No. 22), disturbance in health was due either to the individuality of the animals or to sources of infection probably contacted before the experiment began.

Conclusions

If there were any differences due to the effect of the "radionic" wheat in the growth and condition of weaner rats, they were too small to be detected by this experiment.

Acknowledgment.—The authors would like to thank Mr. T. F. Vallely, M.R.C.V.S., who carried out the *post-mortem* examinations.

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J. A. GARRETT—THE CASE OF "ANGERS"

Intensive Calf Rearing for Veal Production

As a result of the widespread disquiet concerning new methods of calf rearing introduced from the Continent, the President of the British Veterinary Association, accompanied by Mr. F. A. Burden, M.P., Chairman of the Animal Welfare Group in the House of Commons, travelled to Holland to investigate the new methods on the spot. Their Report is printed below.

We have received, also, a paper read to the Western Counties Veterinary Association on the same subject, and this paper follows the Report.

Report on Visit to Holland, July 3rd to 5th, 1960, to Investigate Alleged Cruelty in a New Method of Calf Rearing for Veal Production——

1. There has been growing concern among animal lovers in the United Kingdom at reports of the system of calf rearing for veal production recently introduced from Holland.

2. An invitation to go to Holland and see the system in operation there was extended to us (Mr. F. A. Burden, M.P., and Mr. S. L. Hignett, President of the British Veterinary Association) by a Dutch firm engaged in the manufacture of a milk substitute product used for fattening veal calves.

3. At the express wish of the Parliamentary Animal Welfare Group we were asked to investigate the allegations of cruelty.

4. Whilst in Holland we were given every facility for seeing the system in practice at an experimental station and on commercial farms. We also had opportunities for talking with Dutch veterinary surgeons, research workers and farmers.

5. We felt that in our investigations of the allegations of cruelty it was our duty to examine the housing, methods of restraint, hygiene and feeding of the animals.

6. For the successful prosecution of any system of calf rearing a well-insulated building with an efficient form of ventilation is essential. For the well-being of the animal and the successful production of veal the temperature should be within the range 50° to 70° F., the optimum being 65° F., only limited fluctuation being permitted. Under certain conditions this might necessitate the provision of artificial heat during the colder months of the year. We were impressed with the ventilation in the Dutch calf houses where every effort is made to exclude draughts.

7. The feature of veal production in Holland about which we were least happy was the tendency at one experimental station and some farms to deprive the calves of all light except during cleaning and feeding operations. It was argued that complete darkness increases weight gain and food conversion rate. Even if this were true we do not feel that the exclusion of light for so long and to such a marked degree is in the best interests of the calves. There is evidence, however, that the food conversion rate and live-weight increase per day is the same if the animals are kept in complete darkness or in subdued light. We accept that some advantage might accrue from reducing light (either by restricting daylight or providing limited artificial light) in that it could lower the animals' activity and minimise the fly nuisance.

8. There are 2 systems of restraining calves in general use in Holland and one new method that has recently been the subject of experiment.

9. In the oldest system the calves are penned in solid sided boxes the width of which are no more than 20 inches and the length only just sufficient to accommodate the largest calves when 14 weeks of age and ready for slaughter. It is impossible for such animals to lie down and they are subjected to great discomfort aggravated by the development of joint deformity.

10. A second system employs crates having the same measurements as those described in para. 9, but with slatted sides. We believe these crates to be a considerable improvement on the solid sided pens, particularly when the animals are left untied and not chained to a corner of the pen as we saw in some instances. These modifications to the single animal crates are better because we saw that the spaces between the bars allow greater opportunity for movement and air is able to circulate freely. If this system is employed the dimensions of the crates should be sufficient to enable the animals reasonable lateral movement without being able to turn around completely.

11. A third system of restraint we saw consists of a series of standings. The animals are on a slatted wood floor fronted by a series of vertical wooden tethering bars, the neck strap on the calf having a 4-inch chain on either side attaching it to the two adjacent bars, which are 11 inches apart. The distance between each pair of pillars and thus each standing is 12 inches. The neck restraint on each animal is such that lateral movement is restricted only by the length of the chains.

12. Observations in England have shown that calves may be reared and fattened with equal success in multiple pens in which they are not tethered. We did not see this system in operation in Holland but one of us (S. L. H.) has seen the method being used successfully in this country.

13. We took particular interest in hygiene. It is our opinion that by keeping the calves on slatted wooden floors which are raised some inches—usually 10 to 12 inches—above a sloping concrete floor, cleaning is greatly facilitated and the animals do not soil themselves. Soiling can, of course, be a source of serious discomfort.

14. We paid special attention to feeding. We appreciate that it differs little from more conventional and long practised systems in which calves receive a diet comprised almost entirely of whole milk which has a very low iron content. Animals fed in this

way are likely always to be on the border line of anaemia.

15. Although the chewing of woodwork was a common feature and suggested a craving for some missing factor in the diet—probably fibre—it must be pointed out that licking and gnawing of woodwork is commonly encountered even when calves receive a diet designed to meet all their nutritional requirements. At one experimental station a further indication of a possible search for fibre was the high incidence of wool ball in calves able to lick themselves. It is only fair to point out that the presence of wool ball in the stomach of calves was only discovered after slaughter; there having been no indication of anything untoward except in the case of a very few calves which showed a slight decrease in food consumption during the last week or two before slaughter.

16. There has been some apprehension in the United Kingdom about the possibility of minerals being deliberately removed from the milk substitute that comprises the feed. Careful enquiry elicited the information that, in fact, for a variety of reasons calves fed on milk substitute are likely to receive more iron, for instance, than calves raised entirely on whole milk. Indeed, experience has shown that the general health of animals fattened on milk substitute is higher then than when whole milk is the diet. There are not the same disorders nor the same degree of anaemia and the loss of calves from sudden death is markedly less. There is evidence, however, that in areas where the iron content of the water which is added to the milk powder is low it is desirable to balance this with an iron additive for the well-being of the animal and the assurance of an economic return to the farmer.

17. In the light of the foregoing we arrived at the following conclusions:—

(i) Properly conducted and with certain safeguards this new method of veal production is efficient and does not lead to cruelty.

(ii) We would like to state quite categorically that we are opposed to the gross restriction of the hours during which the calves are allowed light, and say quite firmly that the animals should be allowed daylight, which may be restricted in intensity, or artificial light should be provided for a minimum of 8 hours each day. In view of the dearth of information concerning influence of absence of light on the happiness of the calf we feel that research on this aspect of the subject should be given a high level priority but that our foregoing conclusion should be accepted until the results of this experiment are available.

(iii) We do not consider that the use of a solid walled crate is humane.

(iv) The three other systems of restraint:—

(a) the crate with slatted sides,

(b) the tethering on standings, and

(c) the multiple pen.

applied with proper safeguards, commend themselves to us. We advocate that experiments should be undertaken to determine acceptable measurements for the slatted crates and what should be the minimum length of light chains used when calves are kept on standings. It seems to us that the use of the multiple pen forms the ideal method since it ensures that the animals are free to move around.

(v) Whilst accepting that in this country some veal calves have been given a whole-milk diet until they are ready for slaughter and whilst we see no serious disadvantage in the new diet, we do feel that experiments should be undertaken to determine what practical steps can be devised to avoid nutritional deficiencies without reducing the value of the carcase.

We wish to place on record our indebtedness for much help received from Dr. Karsemeyer, President, Dr. de Haan, Secretary, and other members of the Netherlands Veterinary Association, and from Professor A. M. Frens, Director of the State Experimental Station, Hoorn.

F. A. BURDEN, M.P.
S. L. HIGNETT,
President, British Veterinary Association.
July 14th, 1960.

Veal Production*

BY
DR. TJ. BAKKER
Director of Research and Nutrition to Christopher Hill Limited, Poole, Dorset

THE production of veal by feeding calves only on cows' milk is not new. There are records of banquets from the middle ages onwards, where milk-fed veal was one of the many courses served. It has been normal practice on the continent of Europe, as well as in England, to produce this type of meat on a small scale especially for the luxury trade.

When the relative prices of milk and meat became such that milk-fed veal production was no longer economic it went out of fashion in most countries, or was greatly reduced. On the continent of Europe the last war made it impossible to produce this type of veal, and when the war was over it was started up only in Holland, on a very small scale, for a limited market. About 20,000 calves were so fattened each year.

Just after the war "calf milk equivalent" was introduced in Holland for the rearing of calves; this was successful to fatten calves but was not suitable when tried out in practice. In 1952, however, experiments were started on an entirely different basis whereby a real "whole milk substitute" was produced. The basis of this product was skimmed-milk powder, with about 16 per cent. fat added. Certain minerals were added also, the level of vitamins was raised (especially vitamin A and D), and experiments were made with regard to the composition of the fat. After many trials it was found that this should have about the same melting point as butter, and that the acid composition should resemble that of butterfat.

* Paper read to the Western Counties Veterinary Association at Newquay on May 26th.

About 1954 results obtained were such that the product could be marketed with confidence, and in 1955 the first "Milk Replacer" for fattening calves came on the market. Since then the production of veal has expanded from 25,000 calves in 1955 to about 400,000 in 1959. This was of great benefit to the farmer, and it has been calculated that the net profit to the farming community from this enterprise was about £2,700,000 in 1957. The estimate for 1959 was around the £4,000,000 mark. This means a lot in a small country like Holland with a population about a quarter that of England. Not all this veal is sold in Holland; a very large part is exported to France, Italy, Belgium, Luxembourg, Switzerland and the U.K.

Older Methods of Calf Fattening

The old method of fattening calves over a period of about 10 weeks on whole milk was a difficult business and led to a high percentage of losses, partly due to digestive disorders, infectious diseases, and, at the end of the period, through sudden death caused by an excessive anaemia. The symptoms were very marked, and I myself have seen calves, which were perfectly normal and happy, just jump up and drop dead; anything which may cause excitement or fright could trigger off this collapse.

Few farmers were really skilled at this job of fattening calves. In the beginning, when cows' milk replacer was fed similar cases occurred. Up to that time very little research had been done; although it was suspected that death was due to anaemia, the symptoms very much resembled hypomagnesaemia. Veterinary laboratories investigated the matter, and it was found that although some cases were true hypomagnesaemia or on the borderline of hypomagnesaemia, more often no suspicion of this condition could be found and the conclusion was drawn that it was probably a combination of excessive anaemia coupled with a labile state of health.

The present formula of the food on which these calves are fattened is adjusted for its mineral content, particularly copper, iron, and magnesium, and in establishments in Holland very few cases of sudden death occur. In the Denkavit Research Station only 3 calves were lost from the last 500 fattened.

When this product was introduced in England and farmers tried it out it was found that very many more cases of sudden death were noticed, and that at the age of about 5 weeks many calves lost their appetites and could not consume the requisite amount of milk. It was thought that this was probably a question of iron deficiency, and the water supply was investigated. A most peculiar situation was found. The amount of iron in "Denkavit" was adjusted to the iron content present in the tap and well water in Holland. Over there, this varies usually from 0.5 parts per million to 1 part per million, whereas in many places a much higher iron content is found, for instance, up to 17 milligrams per litre. In England, from many samples of water drawn at random no iron could be traced. We have now got the analyses of a large number of water supplies in the southern part of the country and the highest percentage of iron found was 0.02 parts per million whilst most of the water supplies did not contain the slightest trace of iron. This meant that we had to adjust the iron content, and while the investigation was being carried out we warned most of our customers that it would be a good policy to give the calves, at the age of 10 days, a trace-element pill, which contained sufficient iron and copper to see them through to the end of the fattening period. If, however, lack of appetite at a later age was observed a further dose of iron would be required.

By this means we have been able to rear healthy calves, with a mild anaemia, producing the high quality white veal the consumer wants. We are now in a position that the iron can be adjusted to the proper level for the English water supply as far as surveyed by us.

The iron available to calves comes from the following sources:—

Reserve in the liver varies from 100 to 600 mg. per kg. fresh liver.

"Denkavit."

Water used to mix the "Denkavit."

As the first source is unknown it must always be borne in mind that occasionally anaemic conditions may occur, where normally everything would go according to plan.

I have tackled the question of feeding first because we can now take it that we are in a position to produce a food which gives a finished calf at the age of about 10 to 12 weeks, and which has not the deficiencies of fresh cows' milk. The aim of veal production is to produce a calf weighing 260 to 300 lb. live-weight, with a killing-out percentage of above 60 per cent. (usually 62 to 65 per cent.) in a period of 10 to 12 weeks. The carcase is then well-fleshed and covered with a light layer of fat; the latter is important as unless the calf is properly finished it will not be of the high quality which can demand a premium from the butcher. Food conversion is very good, and is usually about 1 to 1.3.

Some Comparison

Many experiments have been done in Holland at Government experimental stations, and from one of them, where a comparison was made between calves reared on fresh cows' milk and on a calf-fattening substitute, it was found that the calves reared on artificial milk had 21 per cent. larger weight increases than those reared on milk. The final weight was 14 per cent. higher than that of the milk-fed calves, while the quality was judged by butchers and veterinarians to be 11½ per cent. higher. This was reflected in the higher price per lb. achieved. The cost to rear calves on artificial food was 35 per cent. less than the cost to rear them on fresh milk, whilst the cash return was 27½ per cent. higher.

The method of management of these calves has undergone many changes during the past 5 years and this is due to the intensive research work of the food manufacturers and the Government experimental stations.

Down the ages the farmers had evolved a certain practice in producing milk-fed veal. The calves were placed in a very small pen surrounded by straw, usually in a kind of box where they were more or

less packed tightly with straw all around them. The pens were always in a dark corner, and to increase the darkness a lid was very often put on top of the box with a few holes in it for the calves to breathe. The theory was that immobility increased the rate of growth and that darkness favoured the production of white flesh—probably because plants reared in darkness are white. The usual outcome was that the calves which survived this treatment invariably had ricketts in the winter and were somewhat stunted in their development, but had acquired quite a bit of meat and a good layer of fat. Through the slightest cause they were put into a state of panic, very often with disastrous results such as the sudden death already mentioned. The result of research work has been as follows.

The Results of Research

The food conversion rate and live-weight increase per day are exactly the same in complete darkness, subdued light, and bright light. It does not make any difference if the calf is kept completely immobile, or if it is given sufficient room to move about. It has been found that fresh air and plenty of oxygen are necessary, and recent results have shown that calves fattened in loose-boxes, kept 4 or 5 together with plenty of room to move about, give better carcases than calves which are tied up. The forequarters are better developed and carry more flesh, which again is reflected in an overall increase in weight and a carcase more acceptable to the butcher and of especial value for the Kosher trade.

In the old days farmers only fattened 1 or 2 calves at a time as a sideline. Now, veal is produced in much larger quantities, and in many cases in Holland you find farmers with 20 or 30 veal calves kept in a converted building or in a house specially built for this purpose, whilst there are some larger establishments where 200 to 250 calves are kept in a specially designed building.

Originally, they were kept in single pens on slatted floors, and the pens were made from solid wood, so that the calves were entirely enclosed. The purpose of this was to keep the calves isolated from each other as much as possible, so that should disease break out this would not spread quickly through the whole stable. The calves could not see each other and could not be observed from a distance by the attendants; they were very easily frightened by anything that happened in the stable, which again is not favourable for growth.

Gradually the pattern of the pens was altered. First the front was replaced by bars so that calves could see other calves, then the solid sides were replaced by bars, and the long partitions between the calves were done away with, only short partitions remaining. Thus there was a better flow of air through the building, the calves could be seen by the attendant, and it could be noticed straight away if anything was wrong.

Calves are herd animals and do not feel safe and happy unless they are with other calves; this appears to be very important. If you enter one of these modern stables where calves can see everything they will not take very much notice of you; even of you kick over a bucket there is no question of sudden fright. The only time calves become really interested in what is happening is at feeding time when the first buckets are brought in.

A Further Advance

The next step forward was when it was discovered that calves could just as well be reared and fattened in loose pens as tied up. In multiple pens they are now kept on slatted floors and are fed individually out of a bucket or have a communal feeding trough, lined with zinc, where they drink together. This last system is cheap for labour but more difficult to manage as a lot depends on the attendant and his stockmanship.

If calves can be prevented from licking each other excessively or drinking urine everything goes well. If, however, one calf persists in these bad habits it must be taken out and finished off in a single pen. Thus, in modern calf houses you always find a number of single pens for special cases.

The general procedure in calf rearing is as follows. When calves are brought in they are kept isolated for about 10 days to find out if they carry any disease such as salmonellosis or colibacillosis. They are kept 4 or 5 together in multiple pens in a warm situation and are well strawed up so that they are comfortable and happy. After this isolation period they come into the main feeding shed and are placed in slatted floor, single or multiple pens.

Temperature in these buildings has to be properly controlled and only limited fluctuation should be allowed. Originally, it was thought that a high temperature was essential, around 70° F. or more. It is now found that this is not essential and most people aim at 65° F. with a variation of 2° or 3° up or down. Below 60° F. food conversion is slightly less good, and if temperature is too cold the very young calves will not drink enough. The superstition that veal can be produced only under high temperature is now a thing of the past.

For the isolation pens a temperature from 55° to 60° F. is enough; in the fattening shed this is usually raised to 65° or 70° F.

Good ventilation is necessary to control temperature and humidity, because in a veal house there is always a large amount of moisture produced not only by the calves themselves but because floors under pens and gutters are washed out daily. In the winter it may be necessary to have artificial heating to keep the temperature from dropping too low during the night or a cold spell.

Most important is the absence of draught. The ventilation must be arranged so that there is no draught at all. Calves, like other young animals, are very liable to catch pneumonia if they are kept in a draughty place.

Light and Management

We advocate subdued light, but we are very much against total darkness in the calf shed and only stress the point of subdued light because it is easier to keep the place free from flies, and the calves are much quieter. For good results the calves should

be comfortable, contented and quiet. As a matter of interest I can mention that on a few farms in Holland, and on one research station, good results have been obtained during the winter in an open-fronted house covered by chickenwire with a false ceiling, and a closed wall between the open front and the pens leaving a feeding passage. The calves were kept on slatted floors and straw.

Management plays an important part in the success of such an enterprise, and there is often a big difference between the results obtained by the different units under similar circumstances.

We have recently solved the problem for a farmer who could not get his calves to grow well and finish properly on "Denkavit," although the conditions under which they were kept, from the human point of view, were ideal. After a long investigation it was found that after the calves had been fed the farmer mixed the powder with cold water up to about double the strength at which they would eventually receive it in preparation for the next meal. He then let the mixture stand over until the next feeding time, when hot water was added to bring it up to a temperature of 102° F. By mentioning a "dark scum" which had formed on top of the reconstituted milk we tumbled to what he was doing. During the 12 hours between feeding times when the milk was standing, all the fat came to the top like "scum," and a fermentation set in. It was then impossible to reconstitute the milk properly as the emulgator used in the product could not stand up to this treatment.

After following the proper instructions to reconstitute the milk—which are to mix it into a paste with cold water, adding boiling water and finishing off again with cold water to reach the required temperature of about 102° F., the farmer was surprised when he obtained a product which looked exactly like milk and gave good results.

This is just an example of what people may do, and the type of thing you can run up against when you are introducing a new technique.

Calves are usually brought in, or taken from their own herd for fattening, having received colostrum and probably milk for 3 or 4 days. They are not fed for a period of 12 hours but are given warm water to drink or a mixture of glucose and water, then they are started on a weak solution of "Denkavit" which is gradually built up to full strength. When buying in calves they are usually given a dose or injection of vitamins A and D. Calves do not grow very fast during the first 3 weeks when they are developing their skeletons; after that period you find that the muscles grow at a fast rate and during the final period fat is laid down. It is important that there should not be any setback—if it took 2 or 3 weeks longer to fatten the calves to the same weight this would eat up most of the profit.

Most of the troubles encountered are of mild digestive disorder, due to over-feeding or a drop in temperature overnight. The proper course is to reduce the amount of powder in the milk or to dilute the food. In bad cases give one or two feeds of glucose and water and then start again with the diluted milk replacer.

If the calves go off their food and have diarrhoea with a high temperature, the farmer is advised to call in immediately his veterinary surgeon, as these are usually signs of severe disease. One of the things which may play havoc with calf rearing is an outbreak of salmonellosis, and the sooner the veterinary surgeon is called in for this and similar cases the better. We always stress this point to our customers, that if they cannot get the calf right over a period of one or two feeds they should call in professional help.

Current Literature

ABSTRACTS

Restraint of Chimpanzees. WALLACE, G. D., FORDOR, A. R., & HARTON, L. H. (1960). *J. Amer. vet. med. Ass.* **136.** 222.

The authors had 10 laboratory chimpanzees varying from 5 to 7 years of age, and 17 to 28 kg. in bodyweight. For their purposes it was necessary to take periodic blood samples, nasopharyngeal swabs, and rectal temperatures. The chimpanzees were unused to handling and some form of sedation was required.

One of the phenothiazine derivatives, perphenazine, was chosen since reports indicated that this drug was probably 5 to 20 times more potent than some other phenothiazine derivatives. The drug was administered orally in pineapple juice at dosages varying from 1.25 mg. per kg. to 4.4 mg. per kg. bodyweight. One chimpanzee refused at any time to accept oral dosage, and was injected intramuscularly at the rate of 0.2 mg. per kg. bodyweight.

The drug was administered frequently for more than 8 months and only 1 case of what appeared to be a toxic reaction was observed in 1 chimpanzee which developed a type of Parkinsonian syndrome when more than 55 mg. of the drug were administered. At the peak of therapy minor degrees of motor restlessness, slight tremors, and muscle weakness, were occasionally observed in the other chimpanzees. Drowsiness was the most constant reaction. As the authors so rightly state, manual restraint of adolescent and adult chimpanzees poses a most formidable problem when individual handling is required. Under these circumstances hypodermic injections become a great problem, and their experience in the use of perphenazine orally is most interesting and constructive.

O. G-J.

Erysipelas as an Environmental Problem. KALICH, J. (1959). *Tierärztl. Umsch.* **14.** 232.

A review is given of recent work concerning the epidemiology of the three serotypes A, B, and N of erysipelothrix. The author reports experiments with variable temperature and humidity. In three special pens, groups of 10 pigs were kept for 14 days in a variable temperature (18 to 28° C.) and humidity (70 to 90 per cent.). Three control groups were kept at

a constant 18° C. and 90 per cent. humidity. On the second day all animals were orally infected with live cultures: groups A and A′ with serotype A, groups B and B′ with serotype B, and groups N and N′ with serotype N. On the 3rd day after infection 8 pigs of group A showed clinical *Erysipelas septicaemia*. The controls A′ remained healthy. Of the other groups no animal became ill. The experiment was repeated with the same result. It is suggested that the two unaffected animals of group A had an individual resistance to the disease as a result of a previous subclinical infection. The author considers greater attention should be paid to the husbandry of pigs since contact of the animal with the particular bacteria cannot in all cases be prevented. Good husbandry should above all start with proper buildings, well insulated, and with good ventilation.

A. D. W.

Response of Favus to Griseofulvin. FERGUSSON, A. G., LOGAN, J. C. P., & DERBLAY, P. R. (1960). *Brit. med. J.* **47.** 1,026.

Favus of the scalp in the human is an intractable disease resistant to all ordinary local treatments. *Trichophyton schoenleini* is the predominant cause of infection, but *T. quinckeanum* may also be responsible. There appears to be a lack of knowledge as to the response of favus to treatment with griseofulvin.

It is not thought that the fungous organisms responsible for favus lead any other than a parasitic existence in human skin. The production of a barrier between fungus and keratin as afforded by griseofulvin would seem almost certain to be followed by the death of the organism, in the absence of a suitable medium for its growth. *T. schoenleini* owing to the depth to which it penetrates would seem to be susceptible to an attack from within outward by an agent which becomes incorporated in keratinous tissue.

Details are given of 2 old standing cases of scaling of the scalp: a woman aged 38, with a complaint of baldness for 36 years, and her daughter aged 12 with scaling of the scalp for 10 years. In both cases *T. schoenleini* was grown in culture from hairs removed from the affected areas. Griseofulvin was given to each patient at the rate of 15 mg. per kg. bodyweight daily. In the woman improvement was noticed after 3 weeks and after rather longer in the daughter. Fungistasis was considered to be complete at 7 weeks in both cases.

Dog-bites and Local Infection with Pasteurella septica. LEE, M. L. H., and BUHR, A. J. (1960). *Brit. med. J.* **44.** 169.

This investigation was carried out to examine the therapeutic management of dog-bites and in particular dog-bites infected with *Pasteurella septica*. Survey of the literature suggested that human *P. septica* infection following dog-bites was thought to be rare in this country.

The material was obtained from 69 patients who suffered dog-bites which had been investigated bacteriologically. Of these 69 patients, 20 (29 per cent.) developed frank wound infection. Fourteen (47 per cent.) of the 30 wounds that were sutured became infected. Only 1 of the group of 9 patients who had prophylactic penicillin therapy developed a wound infection. *P. septica* was cultured from 12 (17 per cent.) of the wounds; this organism is sensitive to penicillin in normal therapeutic doses.

Infected bites require prolonged treatment and may leave unsightly scars. In children the bites are often on the face and it is obviously desirable to ensure healing with minimal scarring. It is suggested that prophylactic penicillin therapy should be given to all patients with serious dog-bites and especially to those in whom the bites have been sutured.

G. F. B.

Flies as Carriers of Swine Fever Virus. REUSS, U. (1959). *Berl. Münch. tierärztl. Wschr.* **72.** 401.

After a short discussion of the publications available on flies as carriers of swine fever virus a case, in the veterinary school in Hanover, is reported in detail where quite evidently flies carried virus from an experimental stable into a nearby breeding pen. The sites of the infected and contact pens is well shown in a diagram which gives dimensions of the various pens involved. *Stomoxys calcitrans*, the "stable fly," breeding in a heap of dung close at hand, was incriminated as the likeliest mechanical carrier.

Clinical Aspects of "Mucosal Disease" in Cattle. STOBER, M. (1959). *Dtsch. tierärztl. Wschr.* **66.** 582.

A report is given about several cases of "Mucosal Disease" observed in northern Germany during 1958-9, including symptoms shown and course as well as differential diagnosis (malignant catarrh, foot-and-mouth disease, rinderpest and hyperkeratosis). The first sign of the disease was diarrhoea, then a serious nasal discharge leading to erosion of the external nares. The eyes sank, while dyspnoea was observed for some days but later was absent. The temperature was initially raised to 39.5-40.8° C. (103.1-105.4° F.). Faeces were liquid, thin, and bubbly, first blood-stained and later containing fibrin and epithelial floccules. The oral epithelium especially of the gum margins, lower lip, and cheeks, was inflamed and covered with white-grey epithelial debris beneath which were round or irregular erosions. Appetite was nil after 1 to 2 days. There was great thirst just before death. Interdigital lesions were observed in all except peracute cases and were inflammatory, erosive, and exudative. Mortality was about 90 per cent. No treatment was of any avail. (1 table, 7 colour photographs.)

A. D. W.

The World Veterinary Association

It has been announced that the 17th World Veterinary Congress will be held in Hanover from August 14th to 21st, 1963.

In the meantime we have received a copy of the Constitution of the World Veterinary Association, as accepted by the 16th International Congress in May, 1959, and in view of its importance to a journal having an international circulation, as has THE VETERINARY RECORD, *we publish the Constitution in full below.*

Article 1

There is established a World Veterinary Association.

The purposes of the Association are:

(a) To unify the veterinary profession throughout the world by providing a central link for national veterinary associations;

(b) to organise and hold World Veterinary Congresses;

(c) to promote all branches of veterinary science by all appropriate means, including

(1) the exchange of information on matters of veterinary interest,

(2) the collection and distribution of information on films,

(3) the establishment of a uniform nomenclature,

(4) the exchange of veterinarians and students.

(d) to help improve veterinary education;

(e) to promote the standing of the veterinary profession;

(f) to establish relations with organisations whose interests are related to the purposes of the Association.

Article 2

The seat of the Association is in The Netherlands.

Article 3

Membership in the Association is open to a national organisation, or a group of national organisations, recognised by the Permanent Committee as representing the profession as a whole in that particular country.

If in the absence of such an organisation or group of organisations its functions are *de facto* performed by a governmental agency, this agency is eligible for membership in the Association.

Article 4

International associations of veterinary specialists may become associate members of the Association.

Article 5

The Permanent Committee may, for serious reasons, expel a member or associate member.

The relevant decision is not taken before the member or associate member concerned has been given an opportunity to be heard.

A proposal to expel a member is voted upon by secret ballot and requires for its adoption a majority of three quarters of the representatives present and voting.

Article 6

The organs of the Association are the Congress and the Permanent Committee.

Article 7

The Congress consists of individual participants, either voting or non-voting, admitted by the Organising Committee in concert with the Permanent Committee. Unless Art. 3, paragraph 2 applies, the individual participant veterinarians must be members of the representative organisation or group of organisations mentioned in Article 3.

Voting participants are: veterinarians. All other participants are non-voting.

Article 8

The Congress convenes every four years.

Each Congress determines at its final meeting, on the proposition of the Permanent Committee, the date and place of the next Congress.

In case of absolute necessity this date or place may be modified by the Permanent Committee. A proposal to this effect requires for its adoption a majority of three quarters of the representatives present and voting.

Article 9

Each Congress is prepared by an Organising Committee.

Within six months after the final meeting of a Congress an Organising Committee is constituted by the member organisation or group of organisations or governmental agency in the country where the next Congress is to be held.

Article 10

The Organising Committee is in charge of the provisional agenda of the Congress. In drawing up the provisional agenda, the Organising Committee takes into account, among other matters, items proposed by the last Congress, the Permanent Committee and the members.

Article 11

The Organising Committee may appoint special committees for the preparation of the work of the sections in which according to article 12 the Congress may be divided, for the financial administration of the Congress, the organisation of activities, or other matters.

Article 12

The Congress meets in general assembly and sections.

Its agenda and the number and subjects of sections are determined by the Permanent Committee.

Each section is entitled to divide itself into sub-sections if necessary or to form special committees to discuss certain questions. Conversely, two or more sections may hold joint meetings to discuss defined subjects.

Article 13

The official languages of the Congress are English, French, German and Spanish, and in addition the language of the country where the Congress is being held, if the Organising Committee so desires.

Article 14

At its first meeting in general assembly, the Congress, presided over by the President of the Permanent Committee, elects

(1) its President, three Vice-Presidents, a Secretary-General, a Treasurer, and as many secretaries as required;

(2) for each section a President, two Vice-Presidents and as many secretaries as required;

(3) if so desired by the Congress Honorary Presidents and Vice-Presidents. Proposals for the elections are made by the Organising Committee.

Each section may at its first meeting elect Honorary Presidents of the section.

Article 15

Each participant veterinarian in the Congress has one vote.

Decisions of the Congress, either in general assembly or in a sectional meeting, are made by a simple majority of the participants present and voting.

If a vote is equally divided, the presiding officer has a casting vote.

Article 16

Sections and individual participants may submit resolutions on questions of veterinary science for adoption by the Congress meeting in general assembly.

After the discussions in the sections have been closed, the Permanent Committee, the President and the Secretary-General of the Congress, and the Presidents of the sections, meeting in private session, examine the proposed resolutions and decide by a simple majority of those present and voting whether and in what form they will be submitted to the Congress meeting in general assembly. If a vote is equally

divided, the President of the Permanent Committee has a casting vote.

The Permanent Committee may submit to the Congress resolutions on any question.

Article 17

The Permanent Committee consists of veterinarians representing members and associate members.

Its task is, besides the duties enumerated elsewhere in this Constitution:

(a) to execute the resolutions of the Congress and to report to the next Congress on their results;

(b) to distribute information to members, which may either be confidential and not intended for publication, or may be inserted in professional journals;

(c) to designate delegates to represent the Association at events connected with veterinary science;

(d) to establish relations with international organisations whose activities cover the same or related fields;

and in general everything conducive to the realisation of the purposes of the Association as set fourth in article 1.

Article 18

Each member and associate member designates one representative in the Permanent Committee.

The member in whose country the next Congress is to be held is entitled to designate a second representative.

The seat of a member's representative elected President of the Permanent Committee is taken by another representative of the same country.

Double representation as meant in paragraphs 2 and 3 of the present article ceases at the beginning of the next Congress and the end of the Presidency, respectively. The decision about whom of the two representatives stays in office rests with the member concerned.

Article 19

Members and associate members (art. 3 and 4), before designating representatives, consult with the Permanent Committee in order to ensure, as far as possible, an equitable representation of the several branches of veterinary science.

Article 20

The Permanent Committee elects a President, two Vice-Presidents and a Deputy Secretary, who, together with the Secretary-Treasurer constitute the executive Bureau of the Permanent Committee.

The President, Vice-Presidents and Deputy Secretary are elected immediately after the closing of each Congress for a period beginning the day after their election and expiring at the end of the day the next Congress is closed.

Vacancies occurring between Congresses are filled for the remaining period of time.

The Secretary-Treasurer, whose office is permanent, is appointed by the Permanent Committee, subject to the subsequent approval of the Congress meeting in general assembly. The Secretary-Treasurer is not necessarily a representative.

Article 21

The President of the Permanent Committee:

(a) represents the Association in law and all other matters;

(b) signs the resolutions of the Congress and sends copies to members, associate members, governments and international scientific organisations of related interests;

(c) convenes the Permanent Committee and the Bureau;

(d) presides over the meetings of Permanent Committee and Bureau, calls for votes and is responsible for the strict observance of the Constitution and Rules of the Association;

(e) executes the decisions of the Permanent Committee and authenticates by his signature the executive documents pertaining thereto.

Article 22

The Secretary-Treasurer of the Permanent Committee:

(a) prepares minutes of all meetings of the Permanent Committee;

(b) forwards to representatives copies of the minutes of meetings and all other documents necessary to keep representatives informed on the activities of the Permanent Committee;

(c) conducts correspondence on all subjects of concern to the Permanent Committee;

(d) executes the decisions of the President;

(e) submits to the Permanent Committee an annual report on its activities one month before the date of the annual meeting;

(f) deposits the monies and values of the Congress Fund;

(g) renders an annual account of the Congress Fund and submits a draft budget for the next year;

(h) pays the expenses of the secretariat.

Article 23

The secretariat of the Permanent Committee is established in the country of residence of the Secretary-Treasurer.

The Secretary-Treasurer is authorised to appoint clerical staff, subject to the subsequent approval of the President.

Article 24

In the event of the President or Secretary-Treasurer not being able to act, his place is taken by one of the Vice-Presidents or the Deputy Secretary, respectively.

Article 25

The Permanent Committee or its Bureau meets in the place where a Congress is being held. Between Congresses, it meets in Europe. The Permanent Committee meets:

(1) every year to examine the annual report submitted by the Secretary-Treasurer, his annual account of the Congress Fund, his draft budget for the next year and other subjects;

(2) during each Congress and

(3) as often as fifteen representatives request so.

Other meetings of the Permanent Committee, and the convening of the Bureau are at the discretion of the President.

Article 26

Each representative in the Permanent Committee has one vote. Decisions of the permanent Committee require a quorum of one third of the representatives.

A representative prevented from attending the meeting may either by written authorisation signed by him, appoint a deputy to vote in his name, or vote himself by letter.

Except for the cases provided for in articles 5 paragraph 3, 8 paragraph 3 and 28 paragraph 1, decisions of the Permanent Committee are made by a simple majority of the representatives present and voting.

If a vote in the Permanent Committee is equally divided, the President has a casting vote, unless the object of the vote is an election under article 20, paragraph 1, when in case of an equal division of votes a decision is reached by drawing lots.

Article 27

The Congress Fund is the fund into which the members mentioned in art. 3 pay their annual contribution to the Association.

The annual contribution is determined by the number of veterinarians represented by each member (art. 3) and assessed individually according to a *per capita* rate fixed by the Permanent Committee.

Article 27a

The Congress Fund:

(a) meets the expenses of the secretariat of the Permanent Committee and the travelling and hotel expenses of the President, the Secretary-Treasurer and the Deputy Secretary of the Permanent Committee;

(b) may be used to contribute towards the expenses relating to the scientific part of the Congress and the printing of Congress reports;

(c) at the discretion of the Bureau of the Permanent Committee, refunds travelling and hotel expenses to delegates designated by the Permanent Committee under article 17, paragraph 2 (c).

The Permanent Committee, after hearing the Congress Fund Committee, fixes the grant to be made under (b) of the present article, taking into account the extent to which the member in the country where the Congress will take place has fulfilled its obligations towards the Congress Fund. No such grant can be made before

(*Concluded at foot of col. 1, page 709*)

News and Comment

HOSTS TO CONGRESS

As readers know the host Division this year is the West of Scotland, which was founded in 1858 and is the oldest Division of the B.V.A., having celebrated its centenary 2 years ago. One of its founders was the renowned Professor James McCall, who also founded the Glasgow Veterinary College as a private educational institution in 1862. Among other famous names associated with the West of Scotland Division are those of Professor William Robb, Professor David Imrie, Professor G. W. Weir, Dr. A. W. Whitehouse and Mr. Donald Campbell. It is of great interest to learn that arising out of a paper read by J. G. McGregor, a member of the Division, on the subject of TB eradication in cattle, the scheme fostered by the Scottish Branch became the spearhead of the national eradication scheme, now nearing its triumphant conclusion.

Although not in the strict sense a host to Congress, the Glasgow School is contributing very much to the programme and to the amenities. Having regard to the high reputation the School now enjoys under its Director, Professor Weipers, it is astonishing to realise that as comparatively recently as 1923 the Government grant was withdrawn in response to the Constable Report which stated that there was need for only one veterinary school in Scotland. The decision was fought with great patience and tenacity by the then Principal, Dr. Whitehouse, and the staff, together with a number of public bodies in the West of Scotland. In due course the folly of the Constable Report in this matter became so manifest that the School was kept officially in being. As soon as the 1948 Act was passed, of course, the School became integrated with the University of Glasgow and its name has become synonymous with research work and teaching of high quality.

All the delegates to the Congress will have cause to be very grateful to the members of the West of Scotland Division and to the Glasgow Veterinary School for the immense amount of work which has gone into preparing a Congress that all will enjoy.

THE CITY OF GLASGOW

"That colourful, hospitable, grand old city of Glasgow . . ." said the American comedian W. C. Fields, and few who have visited the city where this year's Annual Congress of the B.V.A. is to be held would disagree with him. W. C. Fields was a "small-town boy" and possibly much of the attraction which Glasgow held for him was due to the Glaswegian sense of hospitality, unique in a city of its size. Yet Glasgow is not unique in this way only. Alistair Hetherington, editor of *The Guardian*, has described the way it has of opening in sudden vistas such as industrial England does not know. It has been said of Glasgow that it is a kind of Baghdad on the Clyde: one could spend a thousand and one nights exploring its purlieus.

Delegates arriving at one of the four main line railway stations may find it a little difficult to suppress a wry smile when told that the village which later became the city they see before them was named Glasgu—the beloved green place. Further exploration will reveal the 57 public parks, however, acquired long before the days of town planning. *Victoria Park*, near the western boundary of the city, has the world-famous Fossil Grove, a unique specimen of fossilised tree stumps and roots. Those interested in more recent flora should visit the *Botanic Gardens* established by the University, while Kelvingrove Park is the site of the Art Gallery and Museum, which contains among many fine works of art the controversial *Christ of St. John of the Cross* by Salvador Dali.

It would be less than honest to make any claim that Glasgow is, and always has been, a city of sweetness and light. In the middle of the eighteenth century Clydeside merchants were importing from the West Indies a considerable proportion of the sugar and rum sold and consumed in Europe, and they left a mark of their trading in *Jamaica Street*, which leads down to the famous *Gorbals*. The visitor would do well to visit this district: unlike the London County Council, whose policy with slum districts was to destroy both the good and bad and leave aseptic New Towns to sprawl across the countryside, the Glasgow City Council have adopted a far less pusillanimous attitude and have attempted to retain the folk culture still strongly evident in the poorer areas of the city by rehousing the inhabitants in the areas in which they were born and brought up.

The World Veterinary Association.—*Concluded.*

approval of the agenda of the Congress by the Permanent Committee.

Article 27b

The Congress Fund is administered by the Bureau of the Permanent Committee, assisted by a Congress Fund Committee elected by the Permanent Committee.

The administration of the Congress Fund and the depositing of its monies and values by the Secretary-Treasurer under article 22 (f) are subject to the Rules of the Congress Fund.

The Rules of the Congress Fund are established by the Permanent Committee.

The Congress Fund is audited yearly by a qualified auditor.

Article 28

Amendments. This Constitution may be amended by the Permanent Committee provided two thirds of the representatives present and voting are in favour of the amendment.

Proposals for amendments must be received in writing by the Secretary-Treasurer at least three months before the next meeting if they are to be considered at that meeting.

Article 29

The Association takes the place of the International Veterinary Congresses, the Permanent Committee for the International Veterinary Congresses and the Congress Fund of the International Veterinary Congresses.

All property, rights and interests of the International Veterinary Congresses, the Permanent Committee for the International Veterinary Congresses and all the assets of the Congress Fund of the International Veterinary Congresses, are transferred to the Association.

Those whose interest in buildings is more aesthetic than sociological would do well to visit *Glasgow Cathedral*. It is an almost perfect example of pre-reformation Gothic architecture; possibly the sociological implications are even here not entirely absent since many of the anonymous medieval craftsmen who united in its building were, perhaps, ancestors of the people whom the Industrial Revolution condemned to the tenements.

The one building which none of the delegates to the Conference will miss is that which houses *Glasgow University*; built in 1870, it is a notable example of the work of Sir George Gilbert Scott, dominating the landscape for miles around. At present there are about 7,000 students, as high a number as any University in Britain, and every subject is taught with the exception of Art and Domestic Science.

With the exception of *Provand's Lordship*, a delightful manse dating from 1471 in which, it is believed, Mary Queen of Scots lived, most of the other notable buildings in Glasgow were built by the businessmen who developed the city.

DISEASE OF TURKEY POULTS

A meeting to discuss this subject was convened in London last week. After the meeting the following statement was issued.

During the spring and early summer of this year, and particularly during the last 3 months, the diagnostic laboratories have encountered on a fairly widespread scale a disease of turkeys not previously observed in this country in epidemic form. In the main, the disease appears to have been restricted to East Anglia and the S.E. counties, although latterly a few outbreaks have been observed in other parts of the country.

A meeting was held at the Agricultural Research Council offices in Cunard Building, Regent Street, London, on August 19th and was attended by veterinary research workers from the Central Veterinary Laboratories, Ministry of Agriculture, Weybridge, by certain Veterinary Investigation Officers, by research workers from Houghton Poultry Research Station, together with representatives from certain of the national food compounders who have been investigating the condition.

The disease was defined from the point of view of geographical distribution, mortaltiy levels, age incidence, *post-mortem* findings, etc., and investigations which have taken place into the causation of the disease were correlated.

In the early part of the year outbreaks appeared to be associated with certain feeds. To-day the position is less clear-cut and many different types of feed from different suppliers appear to have been involved. It is therefore less easy to consider that nutritional imbalance as such, is directly incriminated. On the other hand, all attempts by various laboratories to isolate any micro-organism or virus have met with negative results, as have efforts to reproduce the disease by biological transmission.

It seems unlikely that any nutritional deficiency or excess *per se* could give rise to the rapid onset of symptoms and high mortality experienced. Therefore one is driven to the conclusion that if the disease originates *via* the intestinal tract then it is probably by some form of pre-formed toxin. So far all efforts to isolate such a toxin have failed, but research along these lines is being vigorously pursued.

At the moment, therefore, no definite solution to the problem has been reached despite extensive research at a number of centres. Nevertheless the meeting did help to clarify the views held by different workers and to arrive at agreement as to the lines of research which might be followed. The disease does not represent any condition so far reported in the literature.

Description of Disease

Ages from 2 weeks up to 20 weeks have been seen to be affected but with the heaviest losses occurring from 2 to 8 weeks of age. On any one farm, all age groups may be involved, or only one age group. The disease seems to have occurred under all systems of husbandry, *i.e.* tier brooders, floor brooders, wood shavings, slatted floors, strawyards, and range and no difference has been noted between breeds, strains and sexes. Incidence has been irregular, one pen being affected whilst an adjacent pen containing similar birds has not. On the other hand, whole farms may be affected.

The disease occurs suddenly, many birds dying in excellent condition. The flock appears listless and there is a decline in food consumption. The birds may stand in a comatose condition or may show nervous symptoms. Death follows in a few hours, the terminal stages may be marked by convulsions, when a peculiar wry-neck condition may be seen. There have been other secondary conditions such as moniliasis, aspergillosis, coccidiosis and salmonellosis, poor feathering and vent pecking.

Principal *post-mortem* findings have been a flaccid condition of the upper intestines together with marked swelling of the kidneys. The crop is usually empty and the gizzard often impacted with litter.

NATIONAL SURVEY OF BRUCELLOSIS IN DAIRY HERDS

This survey will begin on October 1st, 1960, and continue until September 30th, 1961. In view of the practical difficulties of extending the survey to beef herds only milk herds will be included.

The objects of the survey are to estimate : the national incidence of herd infection; the incidence of infection within the herd, including any marked regional variation; the relation of uterine infection to milk infection in the same animal; the effects of the use of S.19 vaccine; and economic loss.

The survey sample which has been drawn by the Ministry's statistical advisers comprises about 3,000 herds containing approximately 74,000 cows Herds will be considered to be infected or not infected on the basis of the results of sequences of Milk Ring tests, biological tests of milk samples, and microscopical examinations of foetal membranes. All laboratory tests and examinations will be carried out at veteri-

nary investigation centres and the Ministry's laboratories at Weybridge and Lasswade.

It is understood that Divisional Veterinary Officers will be able to give to veterinary surgeons in private practice confidential information about the results of tests on their clients' herds. The survey itself will be carried out by full-time officers of the Animal Health Division and private veterinary surgeons will not be called upon.

The National Farmers' Union have agreed to support the survey and it has been emphasised to them, and will be to individual farmers, that any information relating to infection in a herd will not be disclosed to any outside persons or bodies.

DOGS IN SPACE

It may seen superfluous to refer to the successful return to earth of a space rocket containing two dogs and other animals, as the newspapers have already given fully such accounts as were released by the Soviet authorities; but for purposes of reference in the future it seemed useful to note in THE VETERINARY RECORD that it was on August 22nd that Moscow radio described the landing of the space ship and followed this with a " press interview " in which the principal " interviewees " were the two dogs, Strelka anl Belka.

During their flight the dogs were fed on a jelly-like food containing nutritive substances and water, automatically twice a day. Russian scientists using special television apparatus saw them eating.

" Pravda " said that when the rocket took off the dogs pricked up their ears and looked perplexed at the cabin floor. Then they grew anxious and rushed about. With the space ship gathering speed the force of gravity pushed them down. For some time the dogs kept still. Then the ship went into orbit and the state of weightlessness took the dogs in its grip. The dogs floated inside the cabin with their limbs and heads hanging limply. It seemed to the observers that both of them were lifeless.

They soon got used to being weightless, and began eating " their first breakfast in space."

Reporters were also shown the cages in which the mice and a rat made their space flight with the dogs. All the animals appeared to be unharmed and in normal health after their epoch making journey, though the Russians have promised further information when detailed examinations of the animals have been made.

A NEW BROADCAST FARMING PROGRAMME

On September 20th, 1960, the B.B.C. is starting a completely new programme for farmers on sound radio.

The programme will be called " Farming To-day " and will be broadcast every Tuesday evening between 7.15 and 7.30 in Network Three.

Network Three is on the same wavelength as the Third Programme, but the best reception, particularly in the more isolated areas, will be obtained on v.h.f.

The programme will deal with all aspects of farming and its related subjects at a high level, and while it is intended mainly for the farming audience it will, it is hoped, also prove interesting to the intelligent layman.

THIS WEEK'S VETERINARY TELEVISION BROADCAST

A 15-minute television broadcast on the subject of acetonaemia will be given in the B.B.C. service by a veterinary surgeon to-morrow (Sunday) at 12.40 p.m. We are indebted to this gentleman for letting us know details of his talk so that our readers may be advised if they do not see the broadcast and their clients discuss it afterwards.

The veterinary surgeon will begin by mentioning the loss occasioned by this condition and will say that in most cases it is basically a digestive problem. He will then describe in lay terms how acetonaemia may be produced at times of high energy demand on the part of the cow. Some information on symptoms will then be given and illustrated on the television screen, followed by an illustration of the veterinary test which confirms diagnosis.

Methods of treatment are next discussed and mention is made of the increasing use of hormone injections. The veterinary broadcaster will conclude his talk by giving advice on prevention through proper husbandry and diet.

" THE SUPPLEMENT "

Hon. secretaries of Divisions are asked to note that the SUPPLEMENT issued this week was produced in haste so that members of Council might have their Minutes in time for the meeting in Glasgow to-morrow; for that reason Divisional Reports could not be printed in the time available. They will appear in the next SUPPLEMENT, now in press.

FOWL PEST

A County committee has been set up in Warwickshire to promote a campaign for the elimination of fowl pest during a six-week period beginning October 1st.

COMMITTEE OF INQUIRY INTO FOWL PEST

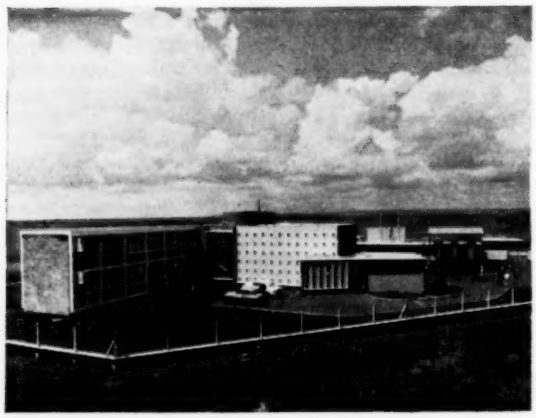
All those who wish to submit evidence to the Committee of Inquiry into Fowl Pest appointed by the Ministry of Agriculture, and the Secretary of State for Scotland should send a memorandum expressing their views to the Secretary of the Committee—Mr. R. A. Isaacson, Great Westminster House, Horseferry Road, London, S.W.1.

The Committee's terms of reference are: " To review the policy and arrangements for dealing with fowl pest in Great Britain, and to advise whether any changes should be made in the light of the growth of the poultry industry, present scientific knowledge and technical and administrative experience gained in recent years in this and other countries."

THE KENYA VETERINARY DEPARTMENT

The research services of the Veterinary Department of Kenya Colony and Protectorate attained the fiftieth anniversary of the opening of the research

laboratories at Kabete on August 12th this year. Kabete has won a place in veterinary literature which might be envied by much larger institutes. Rift Valley Fever, now present in many parts of Africa, was described by its first veterinary pathologist and subsequently elucidated in great detail by a later generation of Kabete scientists. Special mention must also be made of its work on Nairobi sheep disease, "epivag," African swine fever, east coast fever, malignant catarrh, rinderpest, and trypanosomiasis. More recently, research on leptospirosis and lumpy skin disease has been characteristically rapid and productive.



Coinciding with the fiftieth anniversary has been the opening of the Wellcome Institute for Research on Foot-and-Mouth Disease. These new laboratories were made possible by the generosity of the Wellcome Trust, which awarded to the Kenya Government a grant of £100,000 for construction and capital equipment. The Kenya Government has provided the staff and their housing and has accepted responsibility for the Institute's maintenance. Research will be directed towards the elucidation of some of the many problems the disease presents in Kenya, the improvement of existing vaccines and the evolution of new ones.

PERSONAL

Sir Thomas Dalling has been given the honorary degree of Doctor of Laws (LL.D.) of the University of Toronto. This was bestowed on him at the Ontario Veterinary College, Guelph, and it is understood that it is the first time in the 98 years' history of the Veterinary College that an honorary degree of the University has been bestowed there.

Birth

OWEN.—On August 18th, 1960, to Pamela and Anthony Owen, MS.R.C.V.S., at The Leopards, Prizet House, Kendal, Westmorland, a daughter, Rachel Mary, sister to Charlotte, Peter and Anthony.

COMING EVENTS

August

August 28th to September 3rd. 78th Annual Congress of the British Veterinary Association in Glasgow.

31st (Wed.). Annual General Meeting and Dinner of the Alumnus Association at the Royal (Dick) School of Veterinary Studies, Edinburgh, 7.30 p.m.

September

7th (Wed.). General Meeting of the South Wales Division at the Golden Grove Farm Institute, Llandilo, Carms., 2.15 p.m.

Meeting of the B.S.A.V.A. Sussex Region at the New Imperial Hotel, First Avenue, Hove, 8 p.m.

14th (Wed.). Yorkshire Division: one-day Poultry Course at the Yorkshire Institute of Agriculture, Askham Bryan, York, 10.30 a.m.

15th (Thurs.). Meeting of the Supplementary Veterinary Register Division at 7, Mansfield Street, Portland Place, London, W.1, 2.30 p.m.

21st (Wed.). Joint Meeting of the North Wales Division with local Branches of the British Medical Association for a Symposium on Brucellosis at the Imperial Hotel, Llandudno, 2 p.m.

23rd (Fri.). First Meeting of the B.S.A.V.A. branch at the Golden Lion Hotel, Stirling, 6.30 p.m.

October

6th (Thurs.). Meeting of the Technical Development Committee of the B.V.A. at 7, Mansfield Street, Portland Place, London, W.1, 10.30 a.m.

ADDRESSES OF DISEASE INFECTED PREMISES

The list given below indicates, first the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

Anthrax

Argyl. Lenaig Farm, Tayinloan, Tarbert (Aug. 17).
Denbighs. Cae Enion Farm, Rhosllanerchrugog, Wrexham (Aug. 16).
Dorset. Sharpe's Field Ashley Gate, Marnhull, Sturminster, Newton (Aug. 18).
Northants. Marholm Farm, Marholm, Peterborough (Aug. 17).
Westmorland. Swindale Head Farm, Stainmore, Brough, Kirkby Stephen (Aug. 16).

Fowl Pest

Suffolk. Strathallan, Great Green, Cockfield, Bury St. Edmunds (Aug. 17).

Swine Fever

Bucks. Ways Farm, Seven Hills Road, Ivor Heath, Ivor (Aug. 16).
Caerns. Royal Oak Farm, Betws-y-Coed (Aug. 16).
Derbys. Pilsbury House Barn, Willington (Aug. 18).
Devon. Little Comfort, Langtree, Torrington (Aug. 17).
Lancs. Bang Braids Farm, Range Lane, Formby, Liverpool (Aug. 17).
Middlesex. Tythe Farm, Wraysbury, Staines (Aug. 17).
Norfolk. Hellington Corner, Hellington, Norwich (Aug. 18).
Salop. Parkley Farm, Iscoyd, Whitchurch (Aug. 17).
Somerset. Barn Farm, Tickenham, Clevedon, Somerset (Aug. 16).

Letters to the Editor

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

Destruction of Race-horses on the Course

Sir,—It has been suggested in the lay press that veterinary surgeons engaged in work on race-courses have been rather too hasty in destroying animals which could have been restored to usefulness had they been conveyed to some centre where modern methods of orthopaedic surgery might have been made available to them. The particular article which I have in mind was apparently written at the instigation of a member of our own profession. A letter written in the same strain appeared in the correspondence columns of THE RECORD some years ago. The topic is often discussed where sporting people meet and many pearls of wisdom are let fall, by people who can see no reason why an injured horse cannot be chloroformed on the spot and splints applied and the animal need know nothing about it, etc. Even amongst members of our own profession engaged in small-animal practice, in which pinning of bones is commonplace these days, one often hears remarks which seem to take no account of the strength of the Thoroughbred horse, the density of his bones and the gauge of pins, etc., which will have to be devised before any measure of success can be attained in that field. I may be speaking in ignorance of what is already known. Let me say at once, and I am sure I speak for a lot of men engaged on race-courses, that we are all for progress and will co-operate with any institutions which have suggestions to make as to how patients can be conveyed to them.

It should not be forgotten that a number of horses have gone from race-courses with known fractures —such as split pasterns, fractured pisiforms and even fractured pelvises and have not only come back to race but have won races.

For the benefit of those who have not experienced the atmosphere of a race-course it might be worth while attempting to explain some of the difficulties with which the veterinary surgeon has to contend.

Accidents may happen anywhere on a race-course, but not infrequently they occur in the last furlong of a steeplechase particularly when tired horses are being hard ridden. In response to the waving of an orange flag the veterinary surgeon is summoned to attend a fallen horse, often in front of several hundred people. The majority of these people are rational, commonsense beings, but their concern for an injured animal sometimes seems to give rise to a state of what can only be described as mass hysteria. The will sometimes crowd about the scene of an accident in such numbers that the veterinary surgeon has to fight his way to the animal, and he is being given instructions by all and sundry usually to hurry up and destroy the animal, even before he has reached it. Supposing when he does reach it he should diagnose a fracture which could conceivably be treated by "modern methods" here are some of the questions that would have to be decided—very quickly.

1. Is the animal ever likely to be able to race again? If not is it a stallion or a mare of such value as to make it worth while restoring it for stud purposes. (Not many stallions engage in steeplechases.)
2. Somebody would have to offer some sort of prognosis to the owner or trainer to enable a decision to be made as to whether treatment should be undertaken or not. (It is not always easy to contact the owner or trainer even to get consent to destroy an animal.)
3. Somebody would have to hazard a guess as to what any proposed treatment was likely to cost.
4. Some method would have to be found of loading an animal, probably on three legs, into an ambulance without being inhumane. (Many Thoroughbreds cannot be induced to go into an ambulance even when able to use all their limbs.)
5. Can all this be effected within half an hour to have the course clear for the next race?

Even supposing the incidence of fractures, which modern surgical methods might benefit, were twenty times greater than they appear to be at present on British race-courses, the provision of an ambulance service adequately manned with personnel would pose a conundrum in economics. Whilst such a service might be feasible in countries like the U.S.A., where racing is more centralised, until helicopters become mass produced it would scarcely seem to be possible to operate one to serve the scattered race-courses of the British Isles.

The veterinary surgeon's work on a race-course is no sinecure, despite the fact that his remuneration sometimes compares unfavourably with that received by the men employed at the turnstiles. At one time he is abused by the press for being slow in effecting destruction of an animal; more recently he has been criticised for being too quick. When a member of our own profession lends his name, if reported aright, to a mischievous, if not to say irresponsible, newspaper article blaming him for destroying certain animals at all, let no one doubt that the unhappy lot of the race-course veterinary surgeon is in no way ameliorated.

The time seems to be opportune to form a Division of the B.V.A. for those engaged in race-course work, even if a meeting could be arranged only once a year at the Congress.

Yours faithfully,
HORACE BELL.

65-67, Grenfell Road,
Maidenhead,
Berks.
June 18th, 1960.

Sir,—Now that the heat of the controversy in the national press, over the shooting of the Derby favour-

ite, has more or less died down, I may perhaps be permitted to make some comment on the matter.

I was certainly shocked to read of the destruction of that wonderful and extremely valuable horse, without a moment's hesitation; without an X-ray diagnosis, and without reference to the owner who was present. It amazes me that not one of my colleagues has thought it expedient to voice an opinion upon a matter of such momentous importance to the veterinary profession. Still more, that there has been not one word of editorial comment in the veterinary press.

Does the editorial committee feel that such incidents are of no importance to us? Down in Berkshire where I now reside I have heard several quite uncomplimentary opinions expressed concerning veterinary surgeons; and it is very hurtful.

I have no more information about this particular case than I have been able to glean from newspapers, and therefore cannot decide whether the decision to shoot was right or wrong. But it appears there was a transverse fracture of a cannon bone. If so, this is the type of injury which lends itself admirably to modern methods of splinting.

Over the years I have come to learn how wonderfully well nature effects her cures if only allowed to do so. It may take several months, and it may also be that the horse would not race again. But should we not conserve the lives of mares and stallions?

At the risk of being charged with advertising, I think it only fair that I should remind your readers that many years ago I launched a campaign (articles in THE RECORD, and papers read before Societies) urging the possibility and necessity of treating fractures in valuable animals by modern methods. Unhappily the rank and file have done little or nothing about it. But the specialists (such as at the Equine Department of the Animal Health Trust) have given the whole question sympathetic and practical consideration. I, personally, had a number of successes in this field prior to retiring from practice and I remain quite convinced that such wholesale shooting of valuable animals, as goes on, should be stopped. It would be most lamentable if the majority of the public came to the conclusion that the best treatment a veterinary surgeon could offer was a bullet. There are difficulties of course, but these exist to be overcome. In the human surgical field, operations are now carried out successfully which not long ago would have been deemed unthinkable and impossible. It would be a sorry state of affairs if any athlete who broke a leg was never to perform again. I am well aware of the pitfalls as regards horses but would remind readers of the many successes which, in the near past, have resulted from careful thought and expert surgery.

Where sums like £28,000 are involved, I feel it will not be long before Lloyd's underwriters will tighten up the conditions of insurance and demand second and/or third opinions before an animal should be destroyed. I quite appreciate the position of the veterinary surgeon in charge at Epsom. He was surrounded by the public and had to make a decision, one way or the other, and not be open to a charge of cruelty.

Yet he could have referred the immediate decision to the track stewards and the owner and taken some steps to have the animal removed by float to premises where a diagnosis could be made, and an agreed prognosis arrived at.

Yours faithfully,
HAMILTON KIRK.

Loddon Drive,
Wargrave,
Berks.
June 27th, 1960.

Sir,—I followed, with some trepidation, the news account of the destruction of the race-horse "Angers" in this year's Derby. The public seems to have become unusually interested and vociferous over the pros and cons of the decision taken by Mr. Garrett on the spot, which decision, according to the reports of the damage sustained, appears to have been the only true and proper course to follow. What *is* disturbing is that such a decision involving an enormous amount of money and speculation should be burdened on the shoulders of one veterinary surgeon only. Admittedly, in the full view of the public gaze, procedure must be carried out expeditiously; but are the public, notably fickle, changing their opinions on the correct procedure? Has the value of money become so uppermost in our minds that we dare to consider ways and means to keep the animal alive to justify its value and for no other reason? The Jockey Club will have to provide all modern equipment necessary for removal of injured animals to a secluded place where opinions can be formed by *several* experts.

In the meantime, I hardly think it helps for veterinary surgeons to criticise from a distance, and discuss what operative procedures *could* have been carried out. We are all so wise after the event and at a safe distance therefrom.

Yours faithfully,
J. R. BENNET.

Northwick House,
Evesham.
June 7th, 1960.

[This correspondence was held over pending the receipt of a clinical communication from Mr. J. A. Garrett which appears on page 700. It seemed proper, having regard to the ignorant press criticism to which certain race-course veterinary surgeons were exposed, first to obtain the facts in the case most recently before the public.—*Editor.*]

"Doping" of Horses

Sir,—I commend to your notice an article which appeared in yesterday's *Daily Express*, on the subject of horse doping by a new stimulant, as being investigated by Belgian authorities.

I would strongly recommend that editorial comment, or a contributed article concerning the whole question, should appear in THE RECORD. This subject, like that of destroying horses with fractures, and other matters of topical interest, are ignored so far

as our official journal is concerned, although a great number of its readers are intensely interested in them.

It seems to me that great opportunities are missed to lead public opinion, and to guide our members when approached by their clients on these and other subjects.

I would welcome some improvement in veterinary journalism, and would like to see THE RECORD take notice of purely veterinary news for the information and enjoyment of the practising veterinary surgeon. Make THE RECORD a "live" paper.

Yours faithfully,
HAMILTON KIRK.

Loddon Drive,
Wargrave,
Berks.
August 16th, 1960.

Suggested New B.S.A.V.A. Region

Sir,—May I, through the courtesy of your columns, be permitted to make the following announcement:

The Executive Committee of the B.S.A.V.A. are very anxious to form a region covering the following counties :—

Huntingdon, Cambridge, Essex, Suffolk, Norfolk, Bedford, and Northampton.

I have been asked to draw attention to the necessity for organising such a region, and to facilitate this, would interested members please communicate with me, in order that a convenient date for a meeting may be arranged, to discuss and elect officials.

Yours faithfully,
R. S. T. BOWDEN.

Canine Health Centre,
Kennett,
Nr. Newmarket,
Suffolk.
August 23rd, 1960.

"Disease" of Turkey Poults

Sir,—Since attention was drawn to this apparently new complaint affecting turkeys by Stevens *et al.* (*Vet. Rec.* **72.** 627) other workers (Swarbrick, *Vet. Rec.* **72.** 671) and Wannop (*ibid.*), recite similar experiences. It is reported in to-day's *Daily Telegraph* that the Ministry connect it with a high protein diet and that a high carbohydrate diet minimises the "disease." The *Daily Sketch* reports, "Scotland Yard's forensic science laboratory is helping in the hunt for the 'killer'—believed to be a cereal turned poisonous.

All agree that dietetics seem to be involved

Might I suggest that investigators turn to the degree to which "milo" is included in the offending rations. The low cost of this sorghum £21, compared with plate maize £22 and No. 2 American maize £22 (per ton, from an import grain price list, Avonmouth, August 10th, 1960) has led to its inclusion in poultry foods to a far greater extent this year, than in other years.

According to Altschull (1958) sorghum feeds have low palatability, attributed to the presence of tannins. Marsden and Martin (1949) state, "shrunken sorghum seeds, especially hegari, when produced under drought conditions, are dangerous because they sometimes contain a poison, prussic acid."

We have not encountered this disease during the rearing of some 50,000 poults this season but we make our own foods, and while we use most of the common ingredients, we eschew "milo."

Yours faithfully,
T. BARTON MANN.
Director of Veterinary Research.

W. A. Motley Ltd.,
Laboratory and Research Division,
Braust, Weyhill,
Andover,
Hants.
August 17th, 1960.

References

ALTSCHUL, AARON M. (1958). "Processed Plant Protein Foodstuffs." Academic Press Inc., New York.
MARSDEN, STANLEY J., & HOLMES MARTIN, J. (1949). "Turkey Management." 5th ed. The Interstate, Danville, Ill.

Sir,—I was very interested to read a letter from Mr. Swarbrick drawing attention to another indication for the new diuretic hydrochlorothiazide.

We would welcome further reports as we are preparing a comprehensive technical bulletin on the subject of diuresis in veterinary practice.

One small point: the trade name under which we market hydrochlorothiazide is, in fact, Vetidrex. Unfortunately this was misspelt in Mr. Swarbrick's letter as published.

Yours faithfully,
G. N. HENDERSON.

Ciba Laboratories Limited,
Horsham,
Sussex.
August 16th, 1960.

Obstetrics

Sir,—I think it likely that Mrs. Daphne B. Copestake will venture a further experience of childbirth regardless of Mr. Straiton's brash promptings and find it an absorbing piece of personal scientific observation.

I have no wish to detract from the value of her sane comments on natural parturition by turning the correspondence into a haggle over the variable performance of organic matter. Suffice to say that like her I was horrified at the prospect of any baby loitering round the exit for more than a matter of minutes after crowning of the head. I wonder if an infant can survive a 3-hour ordeal by pelvis?

I will gladly volunteer 4 babies in support of Mrs. Copestake's figures, the fourth delivered within the last 48 hours, which may spare me the usual "amnesia" claptrap.

Yours faithfully,
PAMELA F. OWEN.

"The Leopards,"
4, Prizet,
Helsington,
Kendal,
Westmorland.
August 20th, 1960.

Obstetrics.—*continued.*

Sir,—Several years ago when discussing this subject with a very learned person, my platitudes were brought to an abrupt conclusion by the reminder that a woman was not a cow. This I consider sums up the present controversy.

Nevertheless Mr. Straiton is right in warning against too early interference, but the final decision of the "if" and "when," must always rest with the veterinary surgeon in attendance, and he must be guided by his wits—not his watch.

I have seen most wonderful instruments devised with the laudable object of easing the task, but the invariable disadvantages have been their portability, and that if capable of being inserted where devised for, what we already possess as part of our anatomical make-up would render them unnecessary.

It is a waste of time to attempt to draw up a time schedule, in the same way as to arrive at a decision how long retained afterbirth should be allowed to remain. I have heard it advised that these *must* be removed within 6 to 12 hours after parturition, and at this period it is easy! What a lot of pains this advoçate must have taken to arrive at such an opinion, which unfortunately is not in accordance with fact. Such an excess of stupidity is rarely found in nature.

Yours faithfully,
J. F. D. TUTT.

"Rothiemurchus,"
St. Cross,
Winchester.

August 20th, 1960.

The Commercial Exhibition at Congress

The following notes have been supplied by the commercial houses whose stands have, for a number of years, formed a welcome and valuable adjunct to our Annual Congress.

Allen & Hanburys Ltd.

The stand of Allen & Hanburys Ltd., features Dictol-Lungworm (Oral) Vaccine, an oral vaccine providing active immunity against parasitic bronchitis in cattle, which can be administered to calves aged 2 months or over, yearlings or older animals.

A display of colour transparencies draws particular attention to the effectiveness of Dictol in preventing lung damage in vaccinated animals, even when these are exposed to a lungworm challenge sufficient to cause acute husk and death in non-immunised animals.

The value of Dictol in the prevention of parasitic bronchitis is being amply demonstrated in widespread field usage. Production has been temporarily discontinued, but supplies of Dictol will be again available on January 2nd, 1961.

Associated Electrical Industries Limited

The main AEI exhibit will be the *K5 portable X-ray unit*, which will be shown with a *table-type tubestand* and a *carrying case*. The X-ray unit is deservedly popular among veterinary surgeons because, although so compact and convenient, it is powerful enough to provide excellent radiography of the entire body-structure of small animals. With it, diagnostic X-ray service is immediately at hand in the surgery and dispensary, field or patient's home. The unit is 100 per cent. electrically safe. All high-voltage parts, including the X-ray tube, are immersed in oil within an hermetically sealed metal container—a shock-proofing construction principle pioneered by Newton Victor many years ago and to-day standard practice in the design of medical and industrial X-ray installations operating at many hundreds of thousands of volts. Thus, the unit may be brought close to or in direct contact with any part of the animal with complete safety, minimising manipulation of the patient—an especially valuable feature where there is trauma. The oil-immersion principle also renders the unit wholly impervious to dust, moisture and other climatic conditions.

The other exhibits will comprise *Maxilume Illuminators* which enable radiographs to be viewed without eyestrain; *cassettes and intensifying screens*, which are essential in radiography to reduce exposure time to a minimum, to overcome involuntary movement on the part of the animal and to prevent exposure to excess x-radiation; a *film corner cutter*, for the removal of the rough edges of hanger clip perforations on radiographs; *lead rubber gloves and aprons*, to give protection against radiation when holding animals for radiographic purposes; *a wall safelight and a ceiling safelight* for the darkroom; and also a *thermometer and interval timer* for efficient X-ray film processing.

Bayer Products Ltd.

The new Pulkid improved range of sheep vaccines is prominently featured at the Bayer stand. All these vaccines are purified to reduce the risk of adverse local reactions, and are tested well above the 1959 B.V. Codex level of potency.

Particular emphasis is devoted to Pulkid EL, which gives triple protection—against pulpy kidney (immunity 5 to 7 weeks), lamb dysentery (immunity for first 14 days) and struck (enterotoxaemia)—all for one injection. Special attention has been paid to the packaging of the Pulkid range, the bottles being designed to show the clear, free-flowing nature of the vaccines. A large-scale cut-out of a Pulkid bottle graphically illustrated this point.

Bayer also show their new anti-bacterial skin cleanser pHisoHex, "the major advance of the century in personal and animal skin cleanliness." A 2-minute wash with pHisoHex ensures virtual sterility of the surgeon's hands and operative area for several hours. pHisoHex is becoming increasingly accepted in veterinary practice as an essential safeguard against cross-infection.

Other Bayer products shown were Kavol and Kavol Plus, Canine Distemper, Hard Pad and Canine Contagious Hepatitis Vaccines with a long record of success. These vaccines have been tested and proved in the strictest clinical trials and in widespread field use. They have successfully protected hundreds of thousands of dogs of all breeds in this country and on the Continent.

On display too were six proven Bayer products for animal practice: Roccal Concentrate 10 X, Murnil, Hepmin, Ravocaine, Tycine and Novalgin.

Boots Pure Drug Co. Ltd.

Two new products will be featured on the Boots stand.

A foot rot aerosol available in plain label packs for dispensing purposes.

Ethidium Bromide eye ointment will be on show for the first time. This is a product of Boots research for the treatment of infectious bovine keratitis and contagious conjunctival keratitis of sheep ("New Forest Disease," "Pink Eye," "Heather Blindness"). It is based on Ethidium, the well-known **Boots product** which has proved so successful in the control of trypanosomiasis. The use of this product for specific eye conditions has recently been reported in the scientific press.

The advantages of the unique Boots "stock book" system designed to help veterinary surgeons with the ordering of their requirements, and to prevent over- and under-stocking, will form one of the displays. It is a simple and efficient

method, and allows full advantage to be taken of the "one transaction" system.

A range of injections for use in metabolic disturbances is displayed. Special prominence in this display is given to injection of calcium borogluconate 20 per cent. with amphetamine sulphate, and injection of calcium borogluconate 25 per cent. with magnesium hypophosphite and amphetamine sulphate. Both these products contain the central nervous stimulant amphetamine, which acts on the cerebrum, medulla, and cortex, stimulating depth and rate of respiration and dilating the bronchioles. It brings about a rapid and spectacular recovery in prostrate cases and helps to prevent further symptoms in less severe cases.

Also featured are the many other veterinary and medical products now in widespread use by members of the profession.

Brookwick, Ward & Company.

Hauptner instruments will include the new continuous-flow "Remuto" syringe with pre-set dosage and two cartridge syringes, the "Syntena" for T.T. work and the "Mutena" with pre-set dosage mechanism. The standard type "Muto" syringe with pre-set dosage mechanism has established itself as the most practical instrument of its type. The 10 c.c. model gives dosages of 0.25, 0.50, and 1 c.c. while the 30 c.c. and 50 c.c. models give 1, 2, 3, 4, and 5 c.c. dosages. The 10 c.c. and 30 c.c. are also made with ground metal plungers for an even higher degree of accuracy and for use where the rubber plunger is unsuitable.

In the improved model of the "Ferroscope" metal detector, the batteries are contained in the hand piece. The whole instrument has the appearance of a tubular metal case about 18 inches long and 3 inches in diameter. There are no separate containers to carry.

Instruments which will be demonstrated during the Congress are the Schecker forceps and the Rhinolaryngoscope. The former is used in place of a tourniquet when taking blood samples from the jugular vein of horses or cattle.

Literature on the versatile Blendinger hook forceps for use in rumenotomy and caesarean operations will be obtainable from the stand on request.

Of interest to the small-animal surgeon is the light duty electric cautery. This extremely handy instrument is invaluable in the sealing up of very small wounds where suturing is impracticable.

Hauptner furniture for the surgery, including the popular Stuttgart table, is gradually becoming better known, and although space does not permit this equipment to be demonstrated, information will be available to enquirers.

The well-known instructional aids are represented by the take-apart models of the pig and hen.

Burroughs Wellcome & Co.

The focal point of the stand is a "working model" of a calf ingeniously illustrating the efficiency of "Franocide" brand diethylcarbamazine citrate in the treatment of parasitic bronchitis in cattle. A progressive arrangement of red and green lights is used in a number of stages to represent diagrammatically the life cycle of *Dictyocaulus viviparus* and the removal of the parasite with "Franocide."

The first two stages are shown with red lights and represent the route followed by infective larvae in reaching the lungs. The third stage is shown in green lights to indicate the development of eggs and the passage of first-stage parasitic larvae on to pasture. The injection of "Franocide" is represented by the gradual disappearance of all the lights with the exception of those in the gastro-intestinal tract, thus indicating the efficiency of "Franocide" in eliminating the migratory stages of *D. viviparus*.

Double-plus protection was also featured on a separate panel to illustrate the comprehensive cover provided by "Epivax-plus" and "Leptovax-plus" against the major canine diseases.

CIBA Laboratories Ltd.

CIBA are exhibiting at the B.V.A. Congress for the first time and have an interesting range of new products on display.

Vetidrex (hydrochlorothiazide) is the first practicable diuretic for general use in veterinary medicine. It is potent, yet safe and well tolerated, a marked advance on the mercurial diuretics. Almost any oedematous condition justifies a trial of Vetidrex; its range of use is so wide that all the possibilities have not yet been explored. Available as injectable solution in vials of 10 mg. containing 50 mg./ml. (boxes of 1 and 5). Tablets containing 25 mg. are also available for small-animal practice and for maintenance therapy in large animals.

Vecortenol (prednisolone trimethylacetate), a powerful corticosteroid with an exceptionally prolonged effect. It can replace all other corticosteroids to advantage, minimising the need for return visits. Available as 4 ml. and 10 ml. rubber-capped vials.

Vioform-Hydrocortisone Salve contains 3 per cent. iodochlorhydroxy-quinoline and 1 per cent hydrocortisone. It is indicated in dermatoses in small animals, especially when complicated by bacterial or fungal infection. Available in 5 G. tubes. Vetidrex, Vecortenol and Vioform are products of CIBA research.

Cooper, McDougall & Robertson Ltd.

A new product Veterinary Aerosol (Ringworm) is the main featured item on the Cooper Stand. Available in a case of 6 x 12 oz. units, each canister bearing a dispensing label "The Ringworm Aerosol," the veterinary surgeon is now offered a quick, efficient and non-messy method of treating ringworm in cattle. Veterinary Aerosol (Ringworm) is non-toxic and is based on the accepted fungicide dichlorophene.

A comprehensive range of veterinary ethical products are also on display.

As a distributor for the veterinary formulations of Cyanamid of Great Britain Ltd., all Aureomycin/Achromycin preparations are exhibited.

Cooper's are sole distributors for the veterinary products manufactured by Merck Sharp & Dohme Limited, and among the formulations displayed are "Decadron" for acetonaemia in cattle, "Depropanex"—a urinary relaxant and "Saluric"—an oral diuretic. In addition, a complete range of Merck Sharp & Dohme steroids are on show.

Cyanamid of Great Britain Ltd.

The Cyanamid stand at the 1960 Veterinary Congress presents Aureomycin in all its formulations.

In treating flocks of herds Aureomycin Soluble Tinted Powder is the ideal formulation: it is easy to apply in the drinking water. Two packs are available, the ¼ lb. jar and the 5 lb. drum. For the large-scale poultry keeper troubled by synovitis, pullet disease, coryza and C.R.D., Aureomycin is the treatment to restore egg production quickly. Most types of bacterial pneumonia respond well to Aureomycin chlortetracycline.

Aureomycin Mastitis Suspension is packed in convenient disposable plastic syringes (at no extra cost) and is successful against streptococcal and many of the troublesome strains of staphylococcal mastitis.

For all-round protection against mixed uterine infections Aureomycin Oblets are recommended. They are clean and easy to handle, and disperse quickly and effectively within the uterus.

It is anticipated that veterinary surgeons will find many uses for the new Aureomycin Puffer Pack which was introduced earlier this year. From this pack Aureomycin can be dispensed swiftly for the treatment of eye infections, superficial wounds, ear infections and for preventing infection after dehorning and castration.

Other veterinary products introduced this year are the Aureomycin Topical Ointment (3 per cent.), for local applications, and the 1 per cent. Ophthalmic Ointment for treatment of conjunctivitis, blepharitis and keratitis.

A picture of the encapsulating machine at Gosport where Cyanamid's veterinary and pharmaceutical products are made is also featured as a reminder that the Aureomycin Capsule is a most convenient formulation of this product.

Where high antibiotic concentrations must be achieved rapidly and where oral administration is not advisable, Achromycin Intramuscular Injection is recommended.

The Distillers Company (Biochemicals) Limited

Nine main products are being featured as follows:—

"Distavone" Suspension Veterinary, which is widely used by veterinary surgeons for the treatment of mixed infections. There is the new 75 ml. vial for this preparation.

"Distaquaine" Suspension Veterinary, the ready-prepared injection of procaine benzylpenicillin which is now used extensively for gram-positive infections. This product also has a new economy pack—the 90 ml. vial.

"Mixtamycin" Solution Veterinary, the ready-prepared injection of streptomycin and dihydrostreptomycin, which is indicated in gram-negative infections. A 90 ml. vial is also shown for "Mixtamycin" Solution Veterinary.

"Solupen", crystalline benzylpenicillin, is featured. The preparation is "buffered" to give a much longer period during which the aqueous solution will retain its potency.

"Streptoquaine" Sulpha Oral Suspension, which is becoming widely accepted as the most convenient therapy for all forms of bacterial enteritis. The product is a ready-prepared suspension which contains dihydrostreptomycin, sulphadimidine, kaolin and pectin.

"Distivit", Injection of Vitamin B12, established for its value in all aspects of convalescence or debility in animal patients.

"Distaval", thalidomide—a safe, non-barbituric sedative and hypnotic which is gaining wide use in small-animal practice. "Distaval" has a calming action which is free from euphoria or initial excitement; it is administered orally and the effects last from four to five hours.

"Vaxitas" DH, the original "one course" bivalent canine vaccine is again featured. This preparation is made in New Zealand and protects dogs against distemper, hard-pad and infectious hepatitis, all in the single course of two injections.

"Enterovax", a vaccine from New Zealand, to protect cats against feline enteritis (panleucopenia). "Enterovax" has been available in this country for nearly two years, during which time it has become widely used in small-animal practice.

Evans Medical Ltd.

The 150th Anniversary of the founding of the company was celebrated on May 28th, 1959, when the then Minister of Health, The Rt. Hon. Derek Walker-Smith, T.D., Q.C., M.P., opened an extensive block of Research Laboratories in which the research activities of the company are now centralised.

The Evans Medical stand lays emphasis upon the service which the company is able to offer to veterinary surgeons from its subsidiary companies, branches, depots and agencies, throughout the country.

New products on display included:—

Carboloma: For the treatment of fascioliasis in both sheep and cattle. The active ingredient carbon tetrachloride, has been formulated to ensure a controlled absorption rate from a muscle depot. Injected by this route a comparatively large dose of carbon tetrachloride can be administered with a minimum of local discomfort and systemic reaction.

Convac Swine Erysipelas Vaccine: A free-flowing emulsion vaccine capable of affording protection in a single 2 c.c. dose from weaning up to bacon weight. Breeding stock require only a single annual injection.

Dermevan Iodophor: The first iodophor to be made available to the veterinary profession in Great Britain. Dermevan Iodophor consists of iodine solubilised with a special surface active agent in such a manner that a very high percentage of the iodine is immediately available for biocidal action. Being bactericidal, virucidal and also effective against fungi its indications are widespread. At high dilutions it remains effective as an excellent antiseptic and detergent agent for the preparation of operation sites and the sterilisation of animal cages and surgical equipment.

W. Gimber & Sons Ltd.

Stand No. 17, that of W. Gimber & Sons Ltd., 2, Queens Road, London, S.E.15, will be exhibiting veterinary surgical instruments and a comprehensive range of veterinary pharmaceutical products.

Amongst the former will be many items of special interest, including the "Oster" small-animal electric clipper, disposable handisleeves, a new type of automatic dosage syringe and the latest veterinary anaesthetic equipment.

A particular feature will be made of the complete range of protective clothing available, including parturition gowns, rubber boots, gloves, operating gowns, aprons, etc., for use in large and small-animal practice.

The extensive selection of veterinary pharmaceutical preparations on display will include: Heplastol, one of the "Silbe" veterinary products, recent reports indicate that Heplastol has proved of value as an adjuvant to the antibiotics in the treatment of neurotrophic virus diseases. "Weyvak" the new canine distemper complex vaccine, prepared from the British strain "Glasgow S123" and canine oculentum hepatitis vaccine prepared and presented by Mansi Laboratories Ltd., Weybridge, Surrey, for whom we are sole distributors.

The hormone preparation of choice for the treatment of infertility "Armour" Chorionic Gonadotrophin Luteinising Hormone, will be exhibited in the Armour Pharmaceutical Co. Ltd., group of glandular products.

The company trust that all veterinary surgeons attending the exhibition will visit this stand, when they will be given the opportunity to observe the wide range of supplies now available through its organisation.

Glaxo Laboratories Ltd.

The main feature of the Glaxo Stand at the Congress Exhibition will be the display devoted to the company's new "four-in-one" sheep vaccine, Ovilin. This new vaccine, the first of its kind, simultaneously protects against pulpy kidney disease, braxy, blackleg and tetanus.

The display will emphasise the advantages of "flock immunisation" and the multiple protection given by the use of Ovilin. All Glaxo sheep vaccines have been reduced in price and the cost of a single dose of this multiple vaccine is no more than that previously paid for a single dose of pulpy kidney vaccine.

The Glaxo exhibit will also give details of the Company's other sheep vaccines, a combined braxy/blackleg prophylactic; Saffelin-T, a combined pulpy kidney and tetanus vaccine; Saffelin, pulpy kidney vaccine; and Mixed Enterotoxaemia vaccine.

"All-in" protection of dogs against four killing canine diseases will also be illustrated at the Glaxo stand, Canilin and Lepsolin vaccines protecting against distemper (including hard pad), canine virus hepatitis, *L. canicola* and *L. icterohaemorragiae*.

Another feature of the Glaxo exhibit will be a display showing the research and development of an all-British anti-fungal antibiotic which is now playing an important role in the control of ringworm infection.

The antibiotic, Griseofulvin, is recognised as a milestone in dermatology and is being successfully used by veterinary surgeons in the treatment of fungal infections in dogs, cats and chinchillas.

C. J. Hewlett & Son Ltd.

With an established reputation of comprehensive service to the profession the company displays on an attractively designed stand, a number of firmly established products together with several new presentations as evidence of a policy aimed at being to the forefront with latest developments.

A representative selection of Milk Fever Injections, Intramammary Cerates, Organon Veterinary Hormones and Ward, Blenkinsop Veterinary Products were featured as well as the exclusive Nebacetin Antibiotic Teat Cannulae, Alboven blood volume expander and Monoven and Trinaven the pentobarbitone injections now widely accepted for euthanasia and anaesthesia particularly in association with Megimide, for which the company is sole distributors, as an antagonist.

Special attention was given to three new additions since the last Congress. Xylocaine brand of Lignocaine originated and developed by AB Astra in Sweden and now recognised as the preparation of choice for local anaesthesia in all species providing more rapid anaesthesia with longer duration and ensuring a minimum of irritation and toxicity.

Etrolene a systemic insecticide for warble fly control. It kills the warble grub when administered only once a year in the form of a drench or as a tablet. Bractol and Bractol D, the provisional names for two preparations of Dl Batyl Alcohol, have been introduced for the treatment of bracken poisoning in cattle, by intramuscular and intravenous injection respectively. These products follow the formula devised by the chemical research workers of the School of Agriculture, University College of North Wales and a Veterinary Investigation Officer of the Ministry of Agriculture, Fisheries and Food, Investigation Centre, Bangor.

Holborn Surgical Instrument Co. Ltd.

A comprehensive selection of the well-known Holborn instruments and equipment for the veterinary surgeon, including those for small animal, equine, bovine, ovine and porcine surgery and treatment will be exhibited on Stand No. 23.

Some items of equipment for special mention are the Rush hook end intramedullary pins for internal fixation of fractures in the cat or dog. Kirschner's Fixation Splints and Ehmer's reduction gear for small-animal fractures. Morhardt's embryotome with pulley wheel head for wire saws, dismountable for portability. Swiss articulated probang with magnetised search head for removing foreign bodies from the stomach of the cow. Danish pattern rumenectomy frame and retractor hooks. Holborn stainless steel vaginal support for ewes. Holborn pig paralyser. Kirkby Peace's Pig catcher. Electric diagnostic instrument handle and torch rechargeable from electric mains.

The above and several other recent inventions are illustrated in the 1960 Holborn veterinary catalogue available to qualified veterinary surgeons on application.

Imperial Chemical Industries Ltd., Pharmaceuticals Division

Of the veterinary specialities exhibited by Imperial Chemical Industries Limited, Pharmaceuticals Division, two groups of products are prominently displayed.

The first contains drugs for the treatment of worm infestation and includes Phenovis—highest purity phenothiazine ground to the right particle sizes for the efficient control of parasitic gastro-enteritis. Dictycide—subcutaneous injection for the treatment of parasitic bronchitis—is included in this section as also is the oral form of the drug, Helmox. The other comprises products for the prevention and treatment of mastitis—Dispolac, rapidly dispersible intramammary antibiotic preparations which not only ensure efficient treatment but also speedy elimination of antibiotic after 36 to 48 hours, and I.C.I. udder wash, a ready-to-use liquid formulation of Hibitane for preventing the spread of mastitis.

Fluothane (halothane) the new non-explosive and non-inflammable inhalation anaesthetic is specially featured. This I.C.I. discovery has become firmly established as the anaesthetic of choice in hospitals, and now veterinarians are taking an increasing interest in its advantages for animal practice. Several papers have already been published in the veterinary press.

Another notable product in this exhibit is Stromez, containing both Sulphamezathine and Streptomycin, for the combined systemic and local treatment of salf scour and enteritis; and attention is also drawn to Fulcin (griseofulvin) —the first reliable oral treatment for ringworm, Mysoline—the widely used anticonvulsant, Sulphamezathine—still the best and safest sulphonamide—and the ever popular Avloprocil A.S.—procaine penicillin ready for injection.

International Serum Company Ltd.

The International Serum Co. Ltd., introduce several new veterinary specialities of the Farbenfabriken Bayer, Leverkusen, including Apocrine-A in oil which is a preparation of pregnant mares' serum in oil. Coforta, aphosphorus compound for injection for the stimulation of metabolism. Bilevon Hexachlorophene for oral administration in the treatment of liver fluke in sheep and cattle.

The range of antibacterial sera for White Scour, haemorrhagic septicaemia and swine erysipelas are also shown.

Kodak Limited

A highlight of the Kodak stand will be a fine dispay of illuminated radiographs covering a variety of veterinary subjects. These interesting radiographs have been kindly loaned for the occasion by Mr. Oliver Graham-Jones, M.R.C.V.S., Zoologial Society of London, by Mr. S. Douglas, M.R.C.V.S., Department of Veterinary Clinical Studies, Cambridge University, and by the Royal Veterinary College.

Also on show will be a display of 2 by 2 inch colour transparencies (loaned from the same sources) many of which were taken using the well-known "Kodak" Technical Close-up Outfit, which can be seen on the stand. This outfit provides a simple and economic method of taking close-up colour, or black-and-white pictures, by flash, from as near as 7 inches. A complete record of a large subject can be made by taking subsequent shots from 3½ feet and 7 feet away. The outfit can be used successfully by a photographically inexperienced person, and it has many useful applications in the veterinary field. It is designed primarily for use with "Colorsnap," "Retinette" or "Retina" cameras.

Kodak services to the veterinary profession and to photography are illustrated by means of a wall panel, a feature of which is a selection of large "Ektacolor" prints. Kodak personnel will be on hand to welcome visitors and to advise on veterinary photography and radiography, and a comprehensive range of literature will be available, free of charge, on the stand.

May & Baker Ltd.

Pharmaceutical Specialities (May & Baker) Ltd. have recently added to their list of established products a new agent for the treatment of bovine redwater—Diampron brand amicarbalide isethionate. Diampron is free from the side-effects which may be associated with older drugs, and has already met with a high degree of success in the first season of general use.

The group of phenothiazine derivatives, possessing multiple properties, and indicated in a wide range of conditions, is represented by Phenergan brand promethazine hydrochloride, Largactil brand chlorpromazine hydrochloride and Vallergan brand trimeprazine tartrate. The latter drug is finding a useful place in the management of irritant and allergic skin disorders, and possesses both sedative and antihistamine properties.

The company's range of intramammary preparations will be shown, including the recently introduced Rovamycin Intramammary Injection, a contribution to the problem of the treatment of penicillin-resistant staphylococcal mastitis.

Trinamide, Vesadin and M & B 693, three sulphonamides extensively employed in veterinary practice, are displayed.

Anaesthetics are represented by Intraval Sodium—now finding increasing application in the anaesthesia of horses and cattle—and Sagatal brand pentobarbitone sodium, a standard anaesthetic for small-animal work.

Other well-known products widely utilised both in small- and large-animal practice, complete the exhibit.

Minsal Limited

The company cordially invite members of the veterinary profession to visit the Minsal stand featuring a complete range of fully trace elemented mineral supplements and licks for all farm stock. Stabilised vitamins of guaranteed potency are added to any supplement to order. The range includes minerals for general feeding and, of particular interest to veterinarians, Minsal T.E.P. and Minsal Fortified numbers 1, 3 and 4.

Minsal T.E.P. was formulated to combat functional infertility in cattle and has more than justified itself. Minsal Fortified No. 4 (containing 50 per cent. calcined magnesite) was designed for positive prevention of hypomagnesaemia and has proved most effective. Minsal Fortified numbers 1 and 3 (both with a 10 per cent. magnesium oxide level) are particularly suitable for inclusion in a production ration and will prevent hypomagnesaemia which in certain circumstances occurs during stall feeding.

Mineral analyses and any other information required will

gladly be supplied. Representatives will be available to discuss nutritional problems particularly of course the mineral aspect of health and disease.

The company has always been pleased to co-operate with veterinarians in the field and would stress that they continue to offer the services of their field and laboratory staff in the investigation of metabolic disease.

Parke, Davis & Co. Ltd.

Parke, Davis & Company present their now well-known range of Chloromycetin veterinary preparations.

Chloromycetin Tincture 10 per cent. in its aerosol pack is now the standard treatment for foot rot in sheep, and is becoming increasingly used in the treatment of foot conditions in other species.

Chloromycetin Tincture Aerosol (Colourless) with its high antisepsis and deep tissue penetrating properties outmodes the topical application of ointments, lotions, creams, powders, etc. The inability of the patient to lick off the tincture is especially appreciated by small-animal practitioners.

Intramycetin, a 15 per cent. suspension of Chloromycetin in water, rapidly changes the clinical picture in cases where the causal organism is resistant to other antibiotics. It is also rapidly gaining favour for the treatment of various conditions in poultry, including turkeys. Intramycetin is available in 10 ml. vials and in 30 ml. multidose containers.

Each tube of Parke, Davis's intramammary preparation Mascetin contains the equivalent of 500 mg. chloramphenicol, and this high antibiotic content ensures that treatment of the infected udder is economical, rapid and effective.

Chloromycetin Vetrettes are especially effective in the treatment of calf scours and other enteric conditions, and as a pessary following parturition, removal of retained membranes, etc. The appearance of strains of *B. coli* resistant to other antibiotics, but still sensitive to Chloromycetin makes the administration of Chloromycetin Vetrettes a "must" in certain cases of calf scours.

The efficiency of Chloromycetin in the treatment of infectious keratitis is also well known, and in this respect Chloromycetin Ophthalmic Ointment will prove of special interest to the large-animal practitioner.

In welcoming both the large- and small-animal veterinary surgeons to our stand, therefore, may we reiterate that the services of our veterinary advisory department are always at the disposal of the profession.

Petfoods Ltd.

A wide range of their high quality cat, dog and bird foods will be displayed by Petfoods Limited, of Melton Mowbray, on stand No. 20. Visual displays giving detailed information on the composition of each of the company's eight products, Lassie, Pal, Chum, Chappie, Kit-E-Kat, Minx, Whiskas and Trill are presented on attractive panels on the stand which will be staffed by personnel from Petfoods Research Department.

The tremendous growth in the popularity of scientifically formulated foods for pets which has resulted in better and safer feeding is dramatically illustrated in chart form. The growth of the various prepared pet food markets is plotted from 1953 up to the present.

Pfizer Ltd.

The Pfizer stand at the 1960 British Veterinary Association's Congress illustrates the range of Pfizer veterinary products with special reference to those with a poultry application.

The poultry population of the United Kingdom has increased enormously in recent years and at the same time, management techniques have changed. Birds are now housed very intensively and whilst this has brought advantages in some respects it has increased the incidence of certain diseases, particularly those of a respiratory nature. It is no longer an economic proposition for the poultryman to wring the neck of an ailing bird and he is prepared to spend money on professional advice which will save birds' lives and stop the spread of disease.

The Pfizer stand gives considerable prominence to two veterinary products which are particularly suitable for the control of poultry disease. These are Terramycin Animal Formula Soluble Powder and Terramycin Suspension in Oil. The Soluble Powder simplifies the problem of medicating a large number of birds since the job can be done *via* the feed or drinking water, and Terramycin Suspension in Oil provides a slow release of antibiotic thus maintaining therapeutic blood levels for several days after injection and saving repeat visits. Both these products possess the very wide range of bacterial activity associated with Terramycin.

Reckitt & Sons Limited

The exhibits on stand No. 26 include :—

Dettol. Dettol is particularly suitable for general veterinary use because, in addition to being an efficient bactericide with a wide range of action, it is well tolerated on the skin and tissues, and is an excellent deodorant. It is also non-poisonous and non-staining. Dettol has been approved as a disinfectant for the purposes of the Diseases of Animals Act.

Dettol Antiseptic Cream. An improved antiseptic hand cream containing the main active ingredients of Dettol together with essential fats to replace those lost by normal washing with soap and water. It has a rapid action against a wide range of pathogenic micro-organisms with a persistance of effect. It is a useful antiseptic lubricant in parturition.

Instrument Dettol. For instrument disinfection, forming a clear solution in soft or distilled water. Rapidly bactericidal against a wide range of pathogenic micro-organisms.

Surgical Dettol. (Blue and Orange) is intended for pre-operative skin disinfection. It is rapidly bactericidal, virtual disinfection of the skin being achieved within one minute.

Disprin forms calcium acetylsalicylate in water. Disprin should be given as a draught, whenever aspirin is indicated. As it is soluble it is less likely to cause irritation of the gastric mucosa.

Codis. A tablet providing soluble aspirin together with codeine phosphate and phenacetin. The tablet disperses rapidly in water and is indicated in all those conditions for which Tab. Codein Co. would normally be prescribed, with the added advantage of better toleration and rapid absorption.

Cafdis is an improvement on the A.P.C. formula in that it contains soluble aspirin, so that when a tablet is placed in water a solution of aspirin and caffeine, in which the phenacetin is finely suspended, is almost immediately formed. This ensures improved tolerance and more rapid absorption than with standard A.P.C. formulations.

Smith Kline & French Laboratories

Smith Kline & French Laboratories Ltd., on Stand 21, are the sponsors of the colour television presentations at the Congress and part of their display shows how this equipment is used in clinical and surgical teaching. Colour television has a disinguished history of medical teaching and was first used in veterinary medicine at the B.S.A.V.A. Congress in March this year. Its outstanding success there encouraged the organisers to the more ambitious programme arranged for this Congress. Booklets and information about colour television are available on the Stand.

SK & F manufacture the nitrofuran products "Neftin" (furazolidone) and "Bifuran" (nitrofurazone furazolidone) and these products are prominently featured on the stand. "Neftin" is well known for its effectiveness against *Samonella* infections in animals and a wide range of poultry diseases. It is marketed in powder form as "Neftin" Premix containing 4.4 per cent. furazolidone. "Bifuran" is of particular interest as a treatment for bacterial enteritis in pigs. Increasing use is showing "Bifuran" to be remarkably effective against enteritis caused by a wide variety of organisms including *E. coli* and *Salmonellae*. It is available as "Bifuran" Supplement for mixing in feeds and "Bifuran" Soluble Tablets for medicating drinking water or individual dosage.

Nitrofurans are still new to British veterinary medicine. They are characterised by a wide-range bactericidal action, little tendency to evoke bacterial resistance and a wide margin of toleration in most animals. Increasing use suggests that they are a valuable addition to the range of drugs commonly used in veterinary practice.